9625LG & HD9625LG Logo Inserters
&
9625LGA & HD9625LGA Media Keyers

Instruction Manual

IMPORTANT SAFETY INSTRUCTIONS

⚡	The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "Dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
❗	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the product.

- Read these instructions
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC – SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

WARNING
DO NOT EXPOSE THIS EQUIPMENT TO DRIPPING OR SPLASHING AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS ARE PLACED ON THE EQUIPMENT.

WARNING
TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE.

WARNING
THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE.

INFORMATION TO USERS IN EUROPE

NOTE

CISPR 22 CLASS A DIGITAL DEVICE OR PERIPHERAL

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to the European Union EMC directive. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

INFORMATION TO USERS IN THE U.S.A.

NOTE

FCC CLASS A DIGITAL DEVICE OR PERIPHERAL

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING

Changes or Modifications not expressly approved by Evertz Microsystems Ltd. could void the user's authority to operate the equipment.

Use of unshielded plugs or cables may cause radiation interference. Properly shielded interface cables with the shield connected to the chassis ground of the device must be used.

REVISION HISTORY

REVISION	DESCRIPTION	DATE
4.0	9625LG, 9625LGA, HD9625LG and HD9625LGA products merged into one manual – preliminary version	Jan 04
4.1	Added information about connecting optional temperature probe Revised Audio Clip menu items	Jan 04
4.2	Revised manual to reflect the addition of Overture software Added troubleshooting section, safety instructions Minor corrections throughout manual	Dec 06
4.2.1	Added information about EMC suppression on serial ports	May 07
4.2.2	Changed IP address for METAR server	May 07
4.2.3	Added Processing Delay information	Jul 07
4.3	Updated "Temperature" and "Audio Over Trans" menu items	Sept 07

Information contained in this manual is believed to be accurate and reliable. However, Evertz assumes no responsibility for the use thereof nor for the rights of third parties, which may be effected in any way by the use thereof. Any representations in this document concerning performance of Evertz products are for informational use only and are not warranties of future performance, either express or implied. The only warranty offered by Evertz in relation to this product is the Evertz standard limited warranty, stated in the sales contract or order confirmation form.

Although every attempt has been made to accurately describe the features, installation and operation of this product in this manual, no warranty is granted nor liability assumed in relation to any errors or omissions unless specifically undertaken in the Evertz sales contract or order confirmation. Information contained in this manual is periodically updated and changes will be incorporated into subsequent editions. If you encounter an error, please notify Evertz Customer Service department. Evertz reserves the right, without notice or liability, to make changes in equipment design or specifications.

This page left intentionally blank

TABLE OF CONTENTS

This page left intentionally blank

CHAPTER 1
TABLE OF CONTENTS

This page left intentionally blank

1. OVERVIEW

1.1. OVERVIEW

The Evertz 9625LG Series Logo Inserters and 9625LGA Series Media Keyers provide a complete range of HD and SDI Logo and Audio Insertion solutions for the digital television plant. The Logo Inserters will key 1 to 16 simultaneous static or animated logos over a full bandwidth program video signal. These units incorporate the best switching technology with the proven channel branding techniques that has brought Evertz to the forefront of digital television technology. Add to this, time and temperature logos, and optional Emergency Alert System support, and you have the most advanced Logo Inserters available today. The Media Keyers provide all the features of the Logo Inserters plus the capability of inserting audio voiceovers from external audio or by playing stored audio clips. Audio Clips can be played on their own or played automatically when associated logos are keyed.

The 9625LG Series Keyers are available in versions to support both standard definition and high definition video. Throughout this manual the term *9625LG Series Keyers* will be used to describe the common features of these keyers. The term *9625LG Logo Inserters* will be used to describe the common features of the Logo Inserters and the term *9625LGA Media Keyers* will be used to describe the common features of the Media Keyers. When necessary, the specific model numbers will be used to distinguish features available only on one model.

Model	Description	Video		AES Audio		Bypass Relays
		Standard Definition	High Definition	Inputs	Outputs	
9625LG	SDI Logo Inserter	√	---	---	---	Standard
9625LGA	SDI Media Keyer	√	---	2 x 4	2 x 4	Standard
HD9625LG	HD Logo Inserter	---	√	---	---	Optional
HD9625LGA	HD Media Keyer	---	√	2 x 4	2 x 4	Optional

There are two versions of the HD9625LG hardware with slightly different feature sets. These early versions were not fitted with a REF IN video reference input or COM port D. These units operate in the same way as the later units except where noted in the manual. Figure 1-1 and Figure 1-2 show the functional differences between these units.

The 9625LG Series Keyers have been designed to manage and store multiple media objects. Logos and audio clips are stored in non-volatile Flash memory and may be downloaded to the hardware via Ethernet FTP using the Nomad™ or Overture™ software (included). One animated logo, or up to 16 static logos, can be keyed simultaneously with independent fade control for each static logo. EAS enabled units have 1 logo reserved for the "crawl" text, thus leaving a maximum of 15 simultaneous logos. The size of each logo is variable and ranges from 1/25th to full screen. The position of the logo, fade rates, clip association and animation rates are also user controllable. The onboard preview allows you to cue your logos for position and content verification prior to going "On Air". On the 9625LGA and HD9625LGA Media Keyers, audio clips are stored as stereo or mono 16-bit, 48kHz WAV format.

Features – Standard Definition Units
- Support 525i, 625i and 16x9 525i video formats
- Automatic equalisation up to 250m@270 Mb/s (Belden 8281 or equivalent cable)
- Input bypass relays for power failure bypass protection

Features – High Definition Units
- Support 1080i, 720p, 1035i, and 480p video formats
- Automatic equalisation up to 100m @ 1.5 Gb/s (Belden 1694A or equivalent cable)
- Equalisation to 25m with optional bypass relay installed
- Optional input bypass relays for power failure bypass protection

Features – All units
- Full 12 bit linear video keyer with logo fade-in and fade-out processing
- Program and preview outputs
- Timing Reference from input video or Colour black Reference input (Colour Black input not available on early HD9625LG units)
- Stores and inserts 1 animated or up to 16 static logos with independent control of logo position, transparency and offset. Enables independent control of fade in and fade out for static logos.
- Download logos from a standard PC using Ethernet using Evertz Nomad™ or InstaLogo™ or Overture™ Software (included).
- Optional support for crawl text logos
- Standard unit has 128 Mbytes of internal media storage
- Optional 1 Gigabyte of internal flash storage (not available on early HD9625LG units)
- Optional front panel Compact Flash for additional 128MB or 1GB storage (not available on early HD9625LG units)
- LTC input for analog or digital 'Breakfast Clock' logos
- Built-in Black Generator accessible through automation commands only
- Multiple control interface options including GPI, RS232 automation control
- Optional rack mount or desktop remote control panel versions available
- Optional temperature probe for temperature logos
- Optional redundant power supply for broadcast applications

Additional Media Keyer Features:
- Eight AES pair inputs and eight AES pair outputs
- Full 4 pair audio voiceover mixing for Dolby 5.1 audio
- Includes embedded audio mixing with 4 AES pair de-embedding and re-embedding for voice-over and clip inserts
- Audio bypass mode for passing Dolby E
- Download logos and audio clips from a standard PC using Ethernet using Evertz Nomad™ or InstaLogo™ or Overture™ Software (included)

EAS Option:
- Emergency alert crawls
- Interfaces to TFT and Sage EAS decoders
- Maximum number of static logos reduced to 15
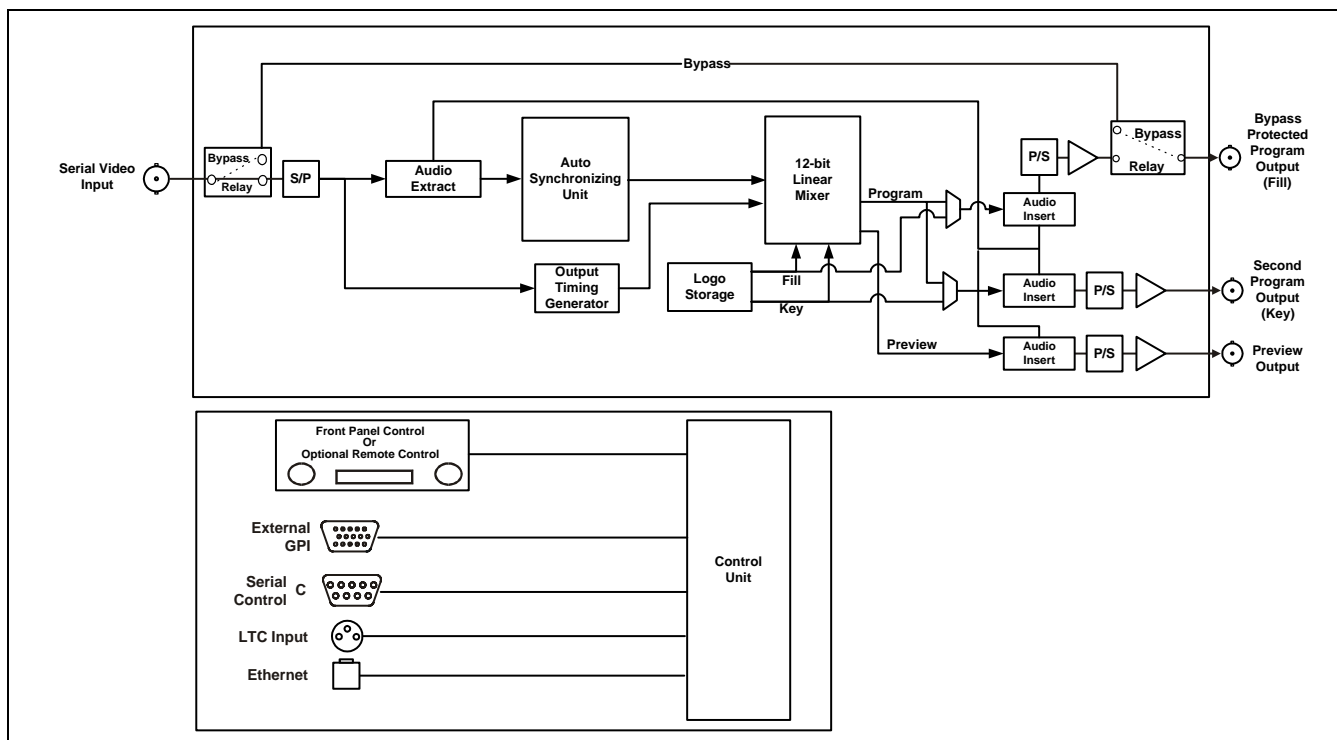
Figure 1-1: Early "Non-Ref" 9625LG Logo Inserter Block Diagram
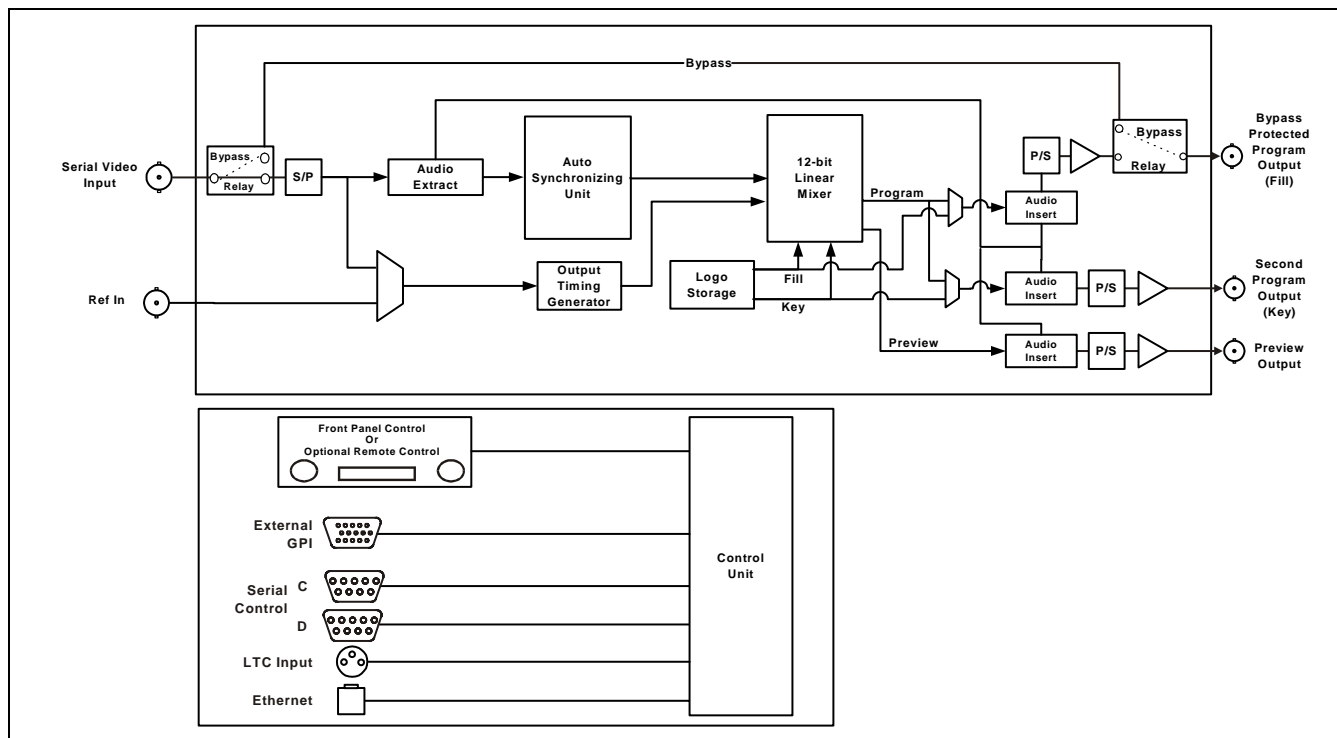
Figure 1-2: Current 9625LG Series Logo Inserter Block Diagram
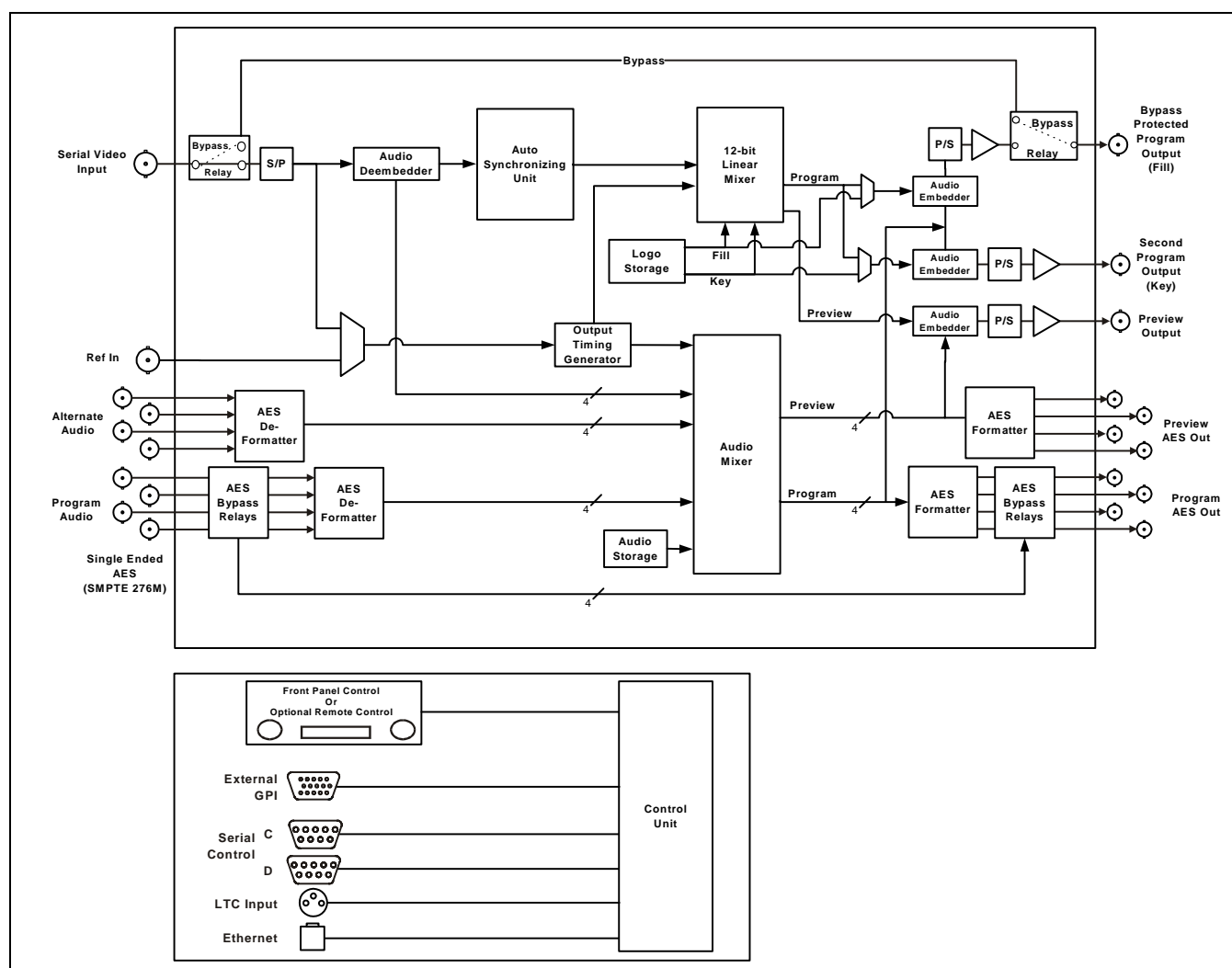
Figure 1-3: 9625LGA Series Media Keyer Block Diagram

1.2.   HOW TO USE THIS MANUAL

This manual is organised into 7 chapters: Overview, Installation, Front Panel Operation, Desktop Remote Panel Operation, Optional EAS Features, Technical Description and Troubleshooting. The overview section contains a brief overview of the 9625LG Series Keyers operation and features and a glossary to define concepts and terms used throughout the remainder of the manual. We highly recommend taking the time to become familiar with the terms and concepts described here before proceeding into the rest of the manual.

Chapter 2 provides a detailed description of the rear panel connectors, and how the 9625LG Series Keyers should be connected into your system.

Chapter 3 shows how to operate the 9625LG Series Keyers using the Front panel controls or Rackmount Remote Control Panel. This chapter also includes information on the Setup Menu system and HTML setup page.

Chapter 4 shows how to control the 9625LG Series Keyers using the Desktop Remote Control panels.

Chapter 5 describes how to set up the 9625LG Series Keyers for use with an EAS decoder (EAS option required).

Chapter 6 provides technical information such as the specifications and how to update the firmware in the 9625LG Series Keyers.

Chapter 7 provides information on troubleshooting various error messages associated with the 9625LG Series Keyers.

> **Items of special note are indicated with a double box like this.**

1.3.   DEFINITIONS

4:2:2   The sampling ratio used in the HDTV digital video signal. For every 4 samples of luminance there are 2 samples each of R-Y (Red minus Luminance) and B-Y (Blue minus luminance).

16x9   A wide screen television format such as HDTV in which the aspect ratio of the screen is 16 units wide by 9 high as opposed to the 4x3 of normal TV.

AES/EBU: (Sometimes abbreviated as AES) Refers to the digital audio standard (AES3-1992) set by the Audio Engineering Society and European Broadcast Union and used by most forms of digital audio from CDs to professional digital video.

Aspect Ratio: The ratio of width to height in a picture. Theatre screens generally have an aspect ratio of 1.85 to 1, widescreen TV (16x9) is 1.77 to 1, and normal TV (4x3) is 1.33 to 1.

CCIR (International Radio Consultative Committee):   An international standards committee. (This organisation is now known as ITU.)

CCIR-601: See ITU-R601.

Cliff effect: (also referred to as the 'digital cliff') This is a phenomenon found in digital video systems that describes the sudden deterioration of picture quality when due to excessive bit errors, often caused by excessive cable lengths. The digital signal will be perfect even though one of its signal parameters is approaching or passing the specified limits. At a given moment however, the parameter will reach a point where the data can no longer be interpreted correctly, and the picture will be totally unrecognisable.

Component analog: The non-encoded output of a camera, video tape recorder, etc., consisting of the three primary colour signals: red, green, and blue (RGB) that together convey all necessary picture information. In some component video formats these three components have been translated into a luminance signal and two colour difference signals, for example Y, B-Y, R-Y.

Component digital: A digital representation of a component analog signal set, most often Y, B-Y, R-Y. The encoding parameters are specified by ITU-R709 for HDTV signals. SMPTE 274M and SMPTE 296M specify the parallel interface.

Composite analog: An encoded video signal such as NTSC or PAL video that includes horizontal and vertical synchronising information.

Composite digital: A digitally encoded video signal, such as NTSC or PAL video that includes horizontal and vertical synchronising information.

D1:   A component digital video recording format that uses data conforming to the ITU-R601 standard. Records on 19 mm magnetic tape. (Often used incorrectly to refer to component digital video.)

D2:   A composite digital video recording format that uses data conforming to SMPTE 244M. Records on 19 mm magnetic tape. (Often used incorrectly to refer to composite digital video.)

D3:   A composite digital video recording format that uses data conforming to SMPTE 244M. Records on 1/2" magnetic tape.

D5:   A component digital video recording format that uses data conforming to the ITU-R601 standard. Records on 1/2" magnetic tape.

Drop frame: In NTSC systems, where the frame rate is 29.97002618 frames per second, the drop frame mode permits time of day indexing of the frame numbers by dropping certain frame numbers. Specifically, frames 0 and 1 at the beginning of each minute except minutes 0,10,20,30,40, & 50, are omitted, to compensate for an approximate timing error of 108 frames (3 seconds 18 frames) per hour. A flag bit is set in the time code to signal when the drop frame mode is in effect.

EBU (European Broadcasting Union):   An organisation of European broadcasters that among other activities provides technical recommendations for the 625/50 line television systems.

Embedded audio: Digital audio is multiplexed onto a serial digital video data stream.

ITU: The United Nations regulatory body governing all forms of communications. ITU-R (previously CCIR) regulates the radio frequency spectrum, while ITU-T (previously CCITT) deals with the telecommunication standards.

ITU-R601: An international standard for standard definition component digital television from which was derived SMPTE 125M and EBU 3246-E standards. ITU-R601 defines the sampling systems, matrix values and filter characteristics for both Y, B-Y, R-Y and RGB component digital television signals.

Letterbox: Placing a wide screen image on a conventional TV by placing black bands at the top and bottom of the screen.

Linear time code: (Also known as Longitudinal Time Code) A digital code used for timing and control purposes on videotape and associated audio tape machines. It is recorded on a

linear track with audio characteristics and is referred to as LTC. Each 80-bit code word is associated with one television frame, and consists of 26 time bits, 6 flag bits, 32 user bits and 16 sync bits. This time code may run at 24, 25 or 30 frames per second depending on the video format. See also SMPTE 12M.

LTC: See Linear Time Code

NTSC: National Television Standards Committee established the television and video standard in use in the United States, Canada, Japan and several other countries. NTSC video consists of 525 horizontal lines at a field rate of approximately 60 fields per second. (Two fields equals one complete Frame). Only 487 of these lines are used for picture. The rest are used for sync or extra information such as VITC and Closed Captioning.

PAL: Phase Alternating Line. The television and video standard in use in most of Europe. Consists of 625 horizontal lines at a field rate of 50 fields per second. (Two fields equals one complete Frame). Only 576 of these lines are used for picture. The rest are used for sync or extra information such as VITC and Teletext.

Pixel: The smallest distinguishable and resolvable area in a video image. A single point on the screen. In digital video, a single sample of the picture. Derived from the words *picture element*.

Serial digital: Digital information that is transmitted in serial form. Often used informally to refer to serial digital television signals.

SMPTE (Society of Motion Picture and Television Engineers): A professional organisation that recommends standards for the film and television industries.

SMPTE 12M: The SMPTE standard for Time and address code. SMPTE 12M defines the parameters required for both linear and vertical interval time codes.

SMPTE 125M: The SMPTE standard for bit parallel digital interface for component video signals. SMPTE 125M defines the parameters required to generate and distribute component video signals on a parallel interface.

SMPTE 259M: The SMPTE standard for 525 and 625 line serial digital component and composite interfaces.

SMPTE 272M: The SMPTE standard for embedding audio in serial digital standard definition (SMPTE 259M) video signals.

SMPTE 274M: The SMPTE standard for bit parallel digital interface for high definition component video signals with an active picture of 1080 lines x 1920 pixels.

SMPTE 276M: The SMPTE standard for transmission of AES/EBU Digital Audio Signals Over Coaxial Cable

SMPTE 292M: The SMPTE standard for high definition serial digital component interfaces.

SMPTE 296M: The SMPTE standard for bit parallel digital interface for high definition component video signals with an active picture of 720 lines x 1280 pixels.

SMPTE 299M: The SMPTE standard for embedding audio in serial digital high definition (SMPTE 292M) video signals.

TRS: Timing reference signals used in composite digital systems. (It is four words long).

TRS-ID: Abbreviation for "Timing Reference Signal Identification". A reference signal used to maintain timing in composite digital systems. (It is four words long.)

CHAPTER 2
TABLE OF CONTENTS

2. INSTALLATION

2.1. REAR PANEL OVERVIEW

Figure 2-1: 9625LG Rear Panel
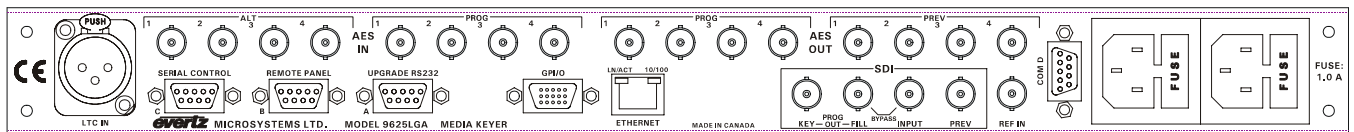
Figure 2-2: 9625LGA Rear Panel
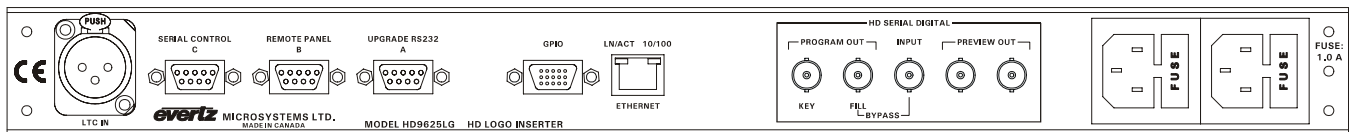
Figure 2-3: Early HD9625LG Rear Panel

Figure 2-1 and Figure 2-2 show the rear panels of the 9625LG and 9625LGA units respectively. The rear panels for the high definition HD9625LG and HD9625LGA units are identical except for the video standards. Figure 2-3 shows the rear panel for early versions of the HD9625LG units that did not have a REF IN or COM D connector. Sections 2.1.1 to 2.1.8 describe the specific video, audio, and control signals that should be connected to the 9625LG Series Keyer units. Sections 2.2 to 2.9 describe how to connect them into your system.

2.1.1. Digital Video Connections

INPUT This BNC connector is for connecting the program serial digital component video signal. This input is protected by a bypass relay to the adjacent **FILL** output BNC. (The bypass relay is optional on high definition units.) When the bypass relay is activated on power loss to the keyer, the **FILL** output will be a direct relay connection to the **INPUT** BNC.

PREV This output BNC connector is the serial digital component preview video output. This preview output connector is normally connected to a SDI preview monitor. Early versions of the HD9625LG had two identical preview outputs.

PROG OUT (FILL, KEY)   These output BNC connectors are the serial digital component program video output. The **FILL** output is protected by a bypass relay to the adjacent **INPUT** BNC. (The bypass relay is optional on high definition units.) When the bypass relay is activated on power loss to the keyer the **FILL** will be a direct relay connection to the **INPUT** BNC.

If you are using your 9625LG Series Keyer as a standard on-air device then set the *Output Mode* menu item to *Pvw/Pgm*. In this mode the input video is overlaid with the logo and then output on both the **KEY** and **FILL** BNCs. Connect one of these outputs to the next video device in your output path.

If you have a switcher or a downstream keyer that requires a separate key and fill signal for the logos, then set the *Output Mode* menu to *Pvw/Key/Fill*. In this mode the Program Output BNCs will contain the Logo fill data on the **FILL** BNC and the Logo key data on the **KEY** BNC.

> ✍ In the *Pvw/Key/Fill* mode you must supply a valid video timing reference signal to the unit. You can provide either an analog video signal into the REF input BNC or a serial digital video signal to the INPUT BNC. The input signal must be running the same video standard as required by your downstream switcher or keyer. See section 3.6.2 for information on selecting the video timing reference signal.

2.1.2. Reference Video Connections

REF IN   This 75 ohm terminated input is for connecting an analog video reference. Connect the **REF IN** connector to the reference input sync. The 9625LG Series Keyer can also be set to derive its timing from the input video connected to the **INPUT** BNC using the *REFERENCE SETUP* menu. This input was not available on early HD9625LG units.

2.1.3. AES AUDIO Connections (9625LGA and HD9625LGA only)

AES PROG IN   These 4 input BNC connectors typically provide inputs for the 4 levels of main program AES audio associated with the video connected to the **INPUT** BNC. The use of the AES PROG inputs can also be reassigned using the HTML Audio Setup page (see section 3.13.1)

AES ALT IN   These 4 input BNC connectors provide inputs for the 4 levels of non-program AES audio. They are typically designed for alternate audio that can be inserted over the normal program audio. The use of the AES ALT inputs can also be reassigned using the HTML Audio Setup page (see section 3.13.1)

AES PROG OUT   These 4 BNC connectors provide outputs for the 4 levels of main program AES audio and should be connected to the main broadcast chain of your plant. These outputs are protected by bypass relays to the **AES PROG** input BNCs. (Bypass relays are optional on HD9625LGA.) When the bypass relay is activated on power loss to the keyer the **AES PROG OUT** will be a direct relay connection to the **AES PROG** inputs.

AES PREV OUT These 4 input BNC connectors provide outputs for the 4 levels of preview AES audio.

2.1.4. Linear Timecode

LTC IN This female XLR connector is an input for SMPTE/EBU linear time code for driving the internal clock for the insertion of "Breakfast" clock style logos.

2.1.5. Serial I/O Connections

UPGRADE RS232 (A) This 9 pin female 'D' connector provides an RS-232 serial interface for connection to a computer and is used for firmware upgrades to the 9625LG Series Keyer. The pin definitions are shown in Table 2-1. See section 6.2 for more information on upgrading firmware.
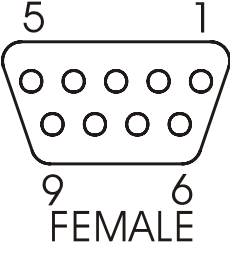
Pin #	Name	Description
1	GND	Chassis ground
2	TxD	RS-232 Transmit Output
3	RxD	RS-232 Receive Input
4		
5	Sig Gnd	RS-232 Signal Ground
6		
7	RTS	RS-232 RTS Input
8	CTS	RS-232 CTS Output
9		

Table 2-1: Upgrade RS232 Port A Pin Definitions

REMOTE PANEL (B) This connector is only available on units shipped with the rack mount or desktop remote control panels. This 9 pin female D connector provides an RS-422 serial interface for connection to the Remote Control Panel. This port is wired as a SMPTE 207M Tributary as shown in Table 2-2. See section 2.4 for information on connecting the remote control panel.
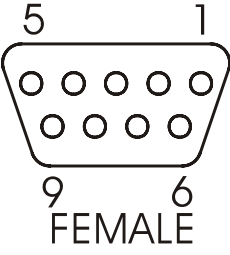
Pin #	Name	Description
1	GND	Chassis ground
2	Tx-	RS-422 Tx-(A) Output
3	Rx+	RS-422 Rx+(B) Input
4	GND	
5		
6	GND	
7	Tx+	RS-422 Tx+(B) Output
8	Rx-	RS-422 Rx-(A) Input
9	GND	

Table 2-2: Remote Panel Port Pin Definitions

SERIAL CONTROL C, COM D   These 9 pin female D connectors provide serial interfaces designed for connection to Automation Systems including the Evertz MetaCast 2 software. The ports are also used to interface to the EAS Decoder (EAS optioned units) or optional temperature probe. These ports can be individually changed to run in either RS422 or RS232 mode by reconfiguring jumpers J19 or J20 on the 7700FC card inside the unit. The SERIAL CONTROL C port is controlled with jumper J19 and the COM D port is controlled with jumper J20. When they are set for the RS-232 mode of operation, the ports have the same pinout as Port A (shown in Table 2-1). When they are set for the RS-422 mode of operation the ports have the pinout shown in Table 2-3. The COM D port was not available on early HD9625LG units.

> **The COM D port is not available on early versions of the HD9625LG**

> **The RS-422 pinout for the SERIAL CONTROL and COM D ports is not a standard SMPTE RS422 pinout. You will have to make a custom cable in order to use these ports in the RS422 configuration.**

	Pin #	Name	Description
	1	GND	Chassis ground
5 1	2	Tx-	RS-422 Tx-(A) Output
O O O O O	3	Rx-	RS-422 Rx-(A) Input
O O O O	4		
	5	GND	
9 6	6		
FEMALE	7	Rx+	RS-422 Rx+(B) Input
	8	Tx+	RS-422 Tx+(B) Output
	9	GND	

Table 2-3: Serial Port C and D – RS422 Pin Definitions

The function of each port must be configured using the *Serial Control* and *Com D* menu items on the *GENERAL* menu. (See section 3.6.5)

> **For proper EMI suppression on earlier units, an external EMC suppression ferrite with >71 ohm @25MHz and >135ohm @100MHz single turn impedance must be installed on cables connected to the SERIAL PORT A, B, C and D connectors.**

2.1.6. GPI/O Connections

GPI/O   This 15 pin female high density 'D' connector contains several general purpose control inputs and outputs. The inputs are used to connect manual or automatic triggers for the display or insertion of media. The outputs provide feedback on internal unit status of the keyer.   See section 2.9 for information on connecting the general purpose inputs and outputs. For information on configuring the GPI functions, see the *GPI Setup* menu item on the *PRESET* menu (section 3.8.1)
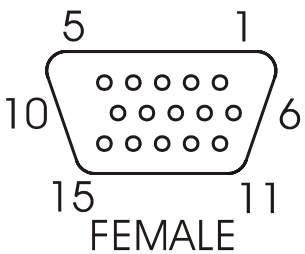
	Pin #	Name	Description
	1	GND	Chassis ground
	2	GPO 2	General purpose output 2
	3	GPO 1	General purpose output 1
	4	GPO 3	General purpose output 3
	5	GPI C	General purpose input Load assigned preset
	6	GPO 4	General purpose output 4
	7	GPI F	General purpose input Load assigned preset
	8	GPI A	General purpose input Load assigned preset
	9	GPI D	General purpose input Load assigned preset
	10	GP+3.3V	+3.3V from general purpose interface board
	11	GPI H	General purpose input Load assigned preset
	12	GPI E	General purpose input Load assigned preset
	13	GPI G	General purpose input Load assigned preset
	14	GPI B	General purpose input Load assigned preset
	15	Vext	External voltage source for GPI's

Table 2-4: GPI/O Connector Pin Definitions

2.1.7. Ethernet Network Connections

ETHERNET   This RJ-45 connector is an Ethernet port used for high-speed firmware upgrades as well as FTP logo transfers. See section 2.8 for information on connecting to an Ethernet network. See section 0 in the *General* menu descriptions for information on configuring the network addresses for the keyer.

2.1.8. Power Connections

The 9625LG Series Keyer main unit has one or two (redundant supply is optional) universal power supplies that operate on 100 to 240 Volts 50/60 Hz AC. The optional Remote Control panels are supplied with a universal input (100 to 240 volts AC at 50 or 60 Hz) 12 VDC power adapter.

2.2. MOUNTING

The 9625LG Series Keyers are equipped with rack mounting angles and fit into a standard 19 inches by 1.75 inches (483 mm x 45 mm) rack space. The optional rack mount Remote Control Panel (RCP) is equipped with rack mounting angles and fits into a standard 19 inches by 1.75 inches by 3.75 inches (483 mm x 45 mm x 150mm) rack space. The mounting angles may be removed if rack mounting is not desired. The optional Desktop Remote Control Panel (DCP) is designed to be mounted on a control panel desk and is fitted with rubber feet to keep it from sliding on the desktop.

2.3. POWER REQUIREMENTS

Power requirements are 100 to 240 volts AC at 50 or 60 Hz. The 9625LG Series Keyer has universal power supplies that automatically sense the input voltage. Power should be applied by connecting a 3-wire grounding type power supply cord to the power entry module on the rear panel. The power cord should be minimum 18 AWG wire size; type SVT marked VW-1, maximum 2.5 m in length. If the units are fitted with the redundant power supply there will be an additional IEC-320 power entry module on the rear panel.

The power entry module combines a standard power inlet connector, two 5 x 20 mm fuse holders and an EMI line filter. See section 6.4.1 for information on changing the fuses.
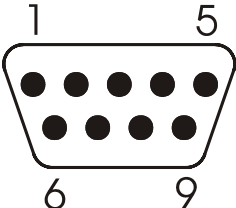
⚠	**CAUTION - TO REDUCE THE RISK OF ELECTRIC SHOCK, GROUNDING OF THE GROUND PIN OF THE MAINS PLUG MUST BE MAINTAINED**

The Remote Control panel is supplied with a universal input (100 to 240 volts AC at 50 or 60 Hz) 12 VDC power adapter. Power should be applied by connecting a 3-wire grounding type power supply cord to the power adapter. Plug the 12 VDC output of the power adapter into the DC power jack on the rear of the Remote panel and secure it by turning the fastening nut.

2.4. CONNECTING THE REMOTE CONTROL PANEL

The 9625LG Series Keyer is available with a rack mountable or desktop remote control panel. The remote control panel is connected to the **REMOTE PANEL** connector on the Keyer units using the straight-through cable provided. For longer distances, simply make your own cable of the required length according to the diagram in Table 2-5. Communications to the remote panel is through a standard straight-through RS-422 connection, so the panel can be located up to 1000 feet from the main electronics unit.

9625LG Series Keyer End				Remote Panel End		
	9 pin D Male	**Pin**	**Belden 9729**	**9 pin D Female**	**Pin**	
		1			1	
	Tx-	2	-------1a------	Rx-	2	
	Rx+	3	-------2b------	Tx+	3	
	Rx Gnd	4	---drain 2----	Rx Gnd	4	
		5				
	Tx Gnd	6	---drain 1----	Tx Gnd	6	
	Tx+	7	-------1b-----	Rx+	7	
	Rx-	8	-------2a------	Tx-	8	
		9			9	
	Frame Gnd	Shield	---drain 1----	Frame Gnd	Shield	

Table 2-5: Remote Control Panel Extender Cable

2.5.   CONNECTING THE VIDEO

2.5.1. Video Inputs

The program video source should be connected to the **INPUT** BNC. The 9625LG and 9625LGA support standard definition digital video in the formats shown in Table 2-6. The HD9625LG and HD9625LGA support high definition digital video in the formats shown in Table 2-7. The video standard must be set manually to match the incoming video type using the *Video Standard* menu item on the *General* menu (see section 3.6.1).

Common Name	Pixels / Active Lines	Frame Rate	Progressive /Interlace	Standard	Valid Genlock Types
525i/59.94	720 x 486	29.97 (30/1.001)	I	SMPTE 125M	NTSC
625i/50	720 x 576	25	I	EBU TECH 3267-E	PAL

Table 2-6: Standard Definition Video Input Formats

Common Name	Pixels / Active Lines	Frame Rate	Progressive /Interlace	SMPTE Standard	Valid Genlock Types
1080i/59.94	1920 x 1080	29.97 (30/1.001)	I	274M	1080i/59.94 1080p/29.97sF NTSC
1080i/50	1920 x 1080	25	I	274M	1080i/50 PAL
720p/59.94	1280 x 720	59.94 (60/1.001)	P	296M	1080i/59.94 1080p/29.97sF 720p/59.94 NTSC

Table 2-7: High Definition Video Input Formats

2.5.2. Video Outputs

The **PROG OUT** BNCs contain the video output from the program buss and should be connected to the main broadcast chain of your plant. The **FILL** output is protected by a bypass relay (optional on high definition units). When the relay is active, the **PROG** output is directly connected to the **INPUT** BNC.

If you are using your 9625LG Series Keyer as a standard on-air device then set the *Output Mode* menu to *Pvw/Pgm*. In this mode the input video is overlaid with the logo and then output on both the **KEY** and **FILL** BNCs. Connect one of these outputs to the next video device in your output path.

If you have a switcher or a downstream keyer that requires a separate key and fill signal for the logos, then set the *Output Mode* menu to *Pvw/Key/Fill*. In this mode the Program Output BNCs will contain the Logo fill data on the **FILL** BNC and the Logo key data on the **KEY** BNC. Connect these outputs to the *Key* and *Fill* inputs of the next video device in your output path.

> In the *Pvw/Key/Fill* mode you must supply a valid video timing reference signal to the unit. You can provide either an analog video signal into the REF input BNC or a serial digital video signal to the INPUT BNC. The input signal must be running the same video standard as required by your downstream switcher or keyer. See section 2.5.3 and 3.6.2 for information on connecting and selecting the video timing reference signal.

The **PREV** output contains the video output from the preview and will normally be connected to a SDI monitor to allow you to view the program output before it goes on air. When the bypass relay is active, the **PREV** output will not have any video on it.

2.5.3. Video Timing Reference

For proper timing of the video and audio signals an analog video genlock reference may be supplied. Connect a composite analog NTSC or PAL colour black video signal to the REF IN connector. Make sure that the signal type is correct for the video standard in use. (See Table 2-6 and Table 2-7) Alternately you can take the timing reference from the input video. The Video reference source is set using the *Reference Setup* menu item on the *GENERAL Setup* menu. (See section 3.6.2)

✎ | On early HD9625LG units that do not have the REF IN connector the timing reference is always taken from the Video Input.

2.6. CONNECTING THE AUDIO (9625LGA AND HD9625LGA ONLY)

The 9625LGA series Media Keyers are capable of working with either embedded audio or discrete AES audio. The *HTML Audio Setup* page is used to select the embedded or discrete AES audio inputs as the background or main audio source for the AES and embedded audio outputs. (See section 3.13.1) The audio available on the AES PROG outputs is embedded into group 1 and 2 on the PROG video outputs. The audio available on the AES PREV outputs is embedded into group 1 and 2 on the PREV video output.

The *HTML Audio Setup* page is also used to select the embedded or discrete AES audio inputs as the voiceover audio source for the AES and embedded audio outputs. (See section 3.13.1). The voiceover audio is mixed with the program audio at the mix levels specified in the *HTML Audio Setup* page (see section 3.13.1) when the **VOICE OVER** button is pressed. The voiceover audio sources are also used as the audio inputs for Emergency Alerts when the EAS option is fitted.

2.6.1. Connecting Program Audio

If you are using discrete AES program audio, connect up to 4 channels of AES audio that is associated with the program video input (connected to the **INPUT** BNC) to the **AES IN PROG** audio inputs. If you are using embedded program audio then you do not need to connect any program audio to the AES inputs. The HTML Audio Setup page is used to select the program audio source for each of the Preview and Program audio outputs. (See section 3.13.1)

2.6.2. Connecting Voice Over or EAS Audio

If you are using discrete AES voiceover audio, connect up to 4 channels of AES audio to the **AES IN ALT** audio inputs. If you are using embedded voiceover audio then you do not need to connect any program audio to the AES inputs. The *HTML Audio Setup* page is used to select the voiceover audio source for each of the Preview and Program audio outputs. (See section 3.13.1) This audio will be mixed with the program audio at the mix levels specified in the HTML Audio Setup page. (See section 3.13.1)

2.6.3. Connecting the Audio Outputs

The **AES PROG OUT** connectors contain the audio outputs from the program audio buss and should be connected to the main broadcast chain of your plant. The **AES PROG OUT** outputs are protected by bypass relays (relays are optional on HD9625LGA). When the relays are active, the **AES PROG OUT** outputs are directly connected to the four **AES PROG IN** inputs. The audio on the **AES PROG OUT** Outputs is also embedded into groups 1 and 2 on the program video outputs.

The **PREV AES OUT** connectors contains the audio outputs from the preview audio buss and will normally be connected to your audio monitoring system to allow you to hear the program audio output

before it goes on air. When the bypass relays are active, the **PREV AES OUT** outputs will not have any audio on them. The audio on the **AES PREV OUT** outputs is also embedded into groups 1 and 2 on the preview video outputs.

2.7.   CONNECTING THE LINEAR TIME CODE

The 9625LG Series Keyers have a linear time code (LTC) input used to provide time information for the analog or digital clock logos. Connect the LTC output from your house master time code source to the LTC IN XLR connector. When using an unbalanced input to the reader, the signal should be applied to pin 3 of the LTC input connector. Normally, the unused input (pin 2) should be connected to ground (pin 1).

2.8.   CONNECTING TO AN ETHERNET NETWORK

The 9625LG Series Keyers are designed to be used with either 10Base-T (10 Mbps) or 100Base-TX (100 Mbps) also known as *Fast Ethernet*, twisted pair Ethernet cabling systems. When connecting for 10Base-T systems, category 3, 4, or 5 UTP cable as well as EIA/TIA – 568 100Ω STP cable may be used. When connecting for 100Base-TX systems, category 5 UTP cable is required. The cable must be "straight-through" with a RJ-45 connector at each end. Make the network connection by plugging one end of the cable into the RJ-45 receptacle of the 9625LG Series Keyer and the other end into a port of the supporting hub.

The straight-through RJ-45 cable can be purchased or can be constructed using the pinout information in Table 2-8. A color code wiring table is provided in Table 2-8 for the current RJ 45 standards (AT&T 258A or EIA/TIA 258B color coding shown). Also refer to the notes following the table for additional wiring guide information.
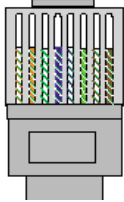
Pin 1	Pin #	Signal	EIA/TIA 568A	AT&T 258A or EIA/TIA 568B	10BaseT or 100BaseT
	1	Transmit +	White/Green	White/Orange	X
	2	Transmit –	Green/White or White	Orange/White or Orange	X
	3	Receive +	White/Orange	White/Green	X
	4	N/A	Blue/White or Blue	Blue/White or Blue	Not used (required)
	5	N/A	White/Blue	White/Blue	Not used (required)
	6	Receive –	Orange/White or Orange	Green/White or Green	X
	7	N/A	White/Brown	White/Brown	Not used (required)
	8	N/A	Brown/White or Brown	Brown/White or Brown	Not used (required)

Table 2-8. Standard RJ45 Wiring Color Codes

Note the following cabling information for this wiring guide:
- Only two pairs of wires are used in the 8-pin RJ 45 connector to carry Ethernet signals.
- Even though pins 4, 5, 7 and 8 are not used, it is mandatory that they be present in the cable.
- 10BaseT and 100BaseT use the same pins, a crossover cable made for one will also work with the other.
- Pairs may be solid colors and not have a stripe.
- Category 5 cable must use Category 5 rated connectors.

The maximum cable run between the keyer and the supporting hub is 300 ft (90 m). The maximum combined cable run between any two end points (i.e. keyer and PC/laptop via network hub) is 675 feet (205 m).

Devices on the Ethernet network continually monitor the receive data path for activity as a means of checking that the link is working correctly. When the network is idle, the devices also send a link test signal to one another to verify link integrity. The keyer rear panel is fitted with two LEDs to monitor the Ethernet connection.

10/100   This Amber LED is ON when a 100Base-TX link is last detected. The LED is OFF when a 10Base-T link is last detected (the LINK LED is ON). Upon power-up the LED is OFF as the last detected rate is not known and therefore defaults to the 10Base-T state until rate detection is completed.

LN/ACT   This dual purpose Green LED indicates that the 9625LG Series Keyers has established a valid linkage to its hub, and whether the 9625LG Series Keyer is sending or receiving data. This LED will be ON when the 9625LG Series Keyer has established a good link to its supporting hub. This gives you a good indication that the segment is wired correctly. The LED will BLINK when the 9625LG Series Keyer is sending or receiving data. The LED will be OFF if there is no valid connection.

2.9.   CONNECTING THE GENERAL PURPOSE INPUTS AND OUTPUTS

Figure 2-4 shows a simplified schematic diagram of the GPIO circuitry. The user can connect GP+3.3V supplied from the keyer unit into the Vext pin to provide power to the GPIO opto-isolator circuitry. In this configuration the user can activate GPIs simply by connecting the GPI input pins to Ground (see Figure 2-5). This can be done with a button, switch, relay or an open collector transistor. In this configuration the GPIs will be internally pulled up to 3.3 volts. (See Figure 2-5) 3.3 volts is available to the user to be used for driving external circuitry. Care must be taken to limit the load to 0.5W so there is no affect on the power supply source on the unit.

✍	**Warning: Do not connect GP+3.3V from one unit to another unit's GP+3.3V output.**

Alternately, the user can connect an external power source for the opto-isolator circuitry. The Vext voltage must be greater than the voltage supplied to GPI by at least 3v. Figure 2-6 and Figure 2-8 show how to wire the GPIs and GPOs from an external power supply.

The tally outputs are active low and require an external pull up (10k Ohm) resistor to the Vext pin. When active, the output will go low and is able to sink up to 10mA. When inactive, the signal will go high (to the voltage applied to the Vext pin). Do not attempt to source more than 100µA from the output.

External   Unit

GP+3.3v   10   + 3.3 Volts

Vext   15

1.8 k Ohm   GPI Commands To Internal Circuit

GPI A   8
GPI B   14
GPI C   5
GPI D   9
GPI E   12   Same as above
GPI F   7
GPI G   13
GPI H   11

Vext   15

10k Ohm (external)

GPO 1   3

GPO Tallies From Internal Circuit

GPO 2   2
GPO 3   4   Same as above
GPO 4   6

GND   1   Chassis Ground
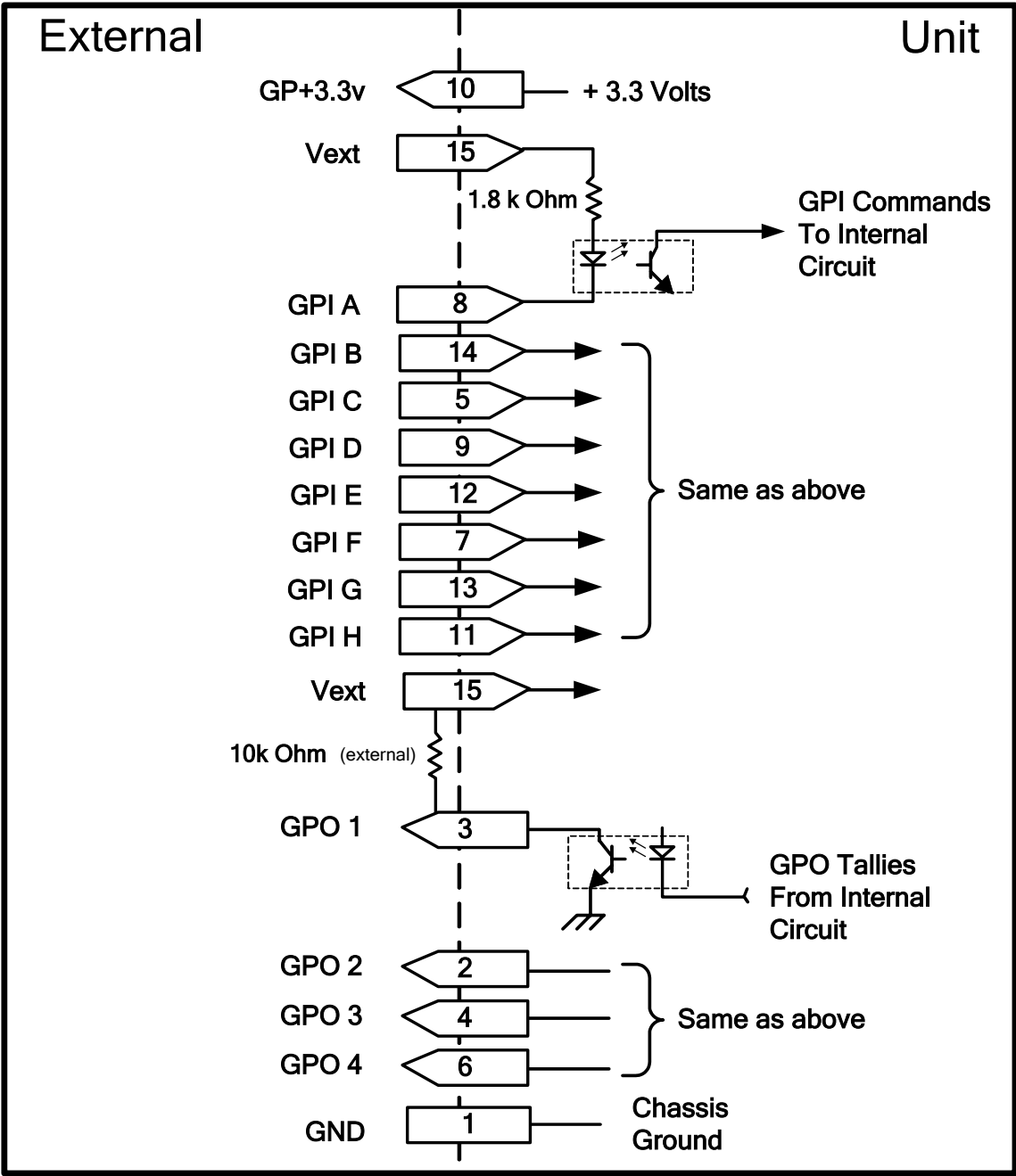
Figure 2-4: Keyer GPIO Opto Isolator Circuitry
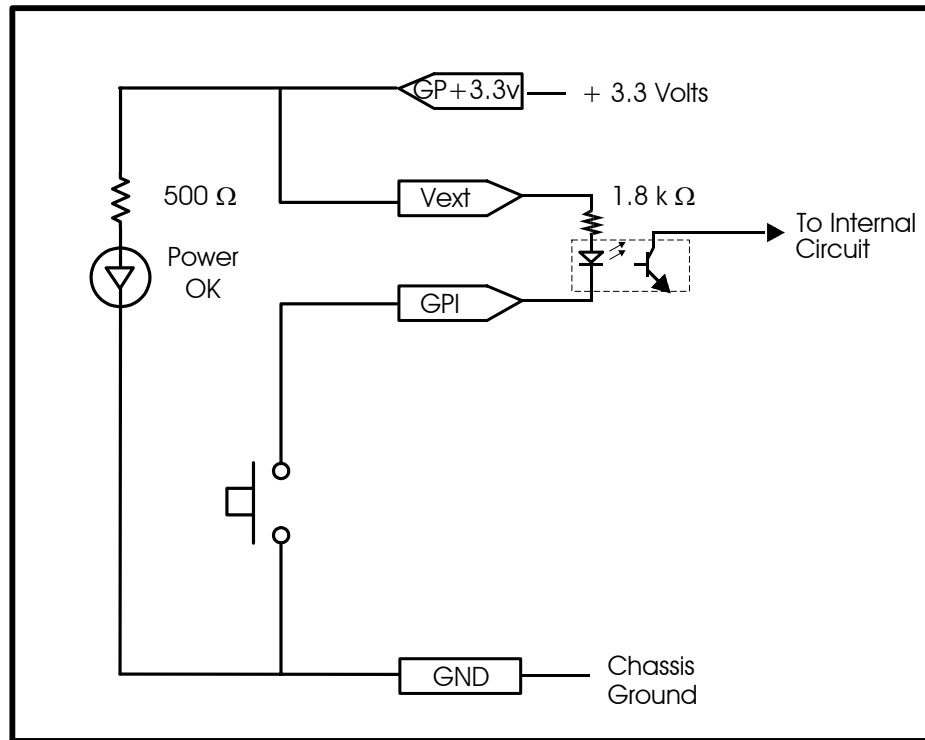
Figure 2-5: Powering the General Purpose Input Opto Isolators from the Unit
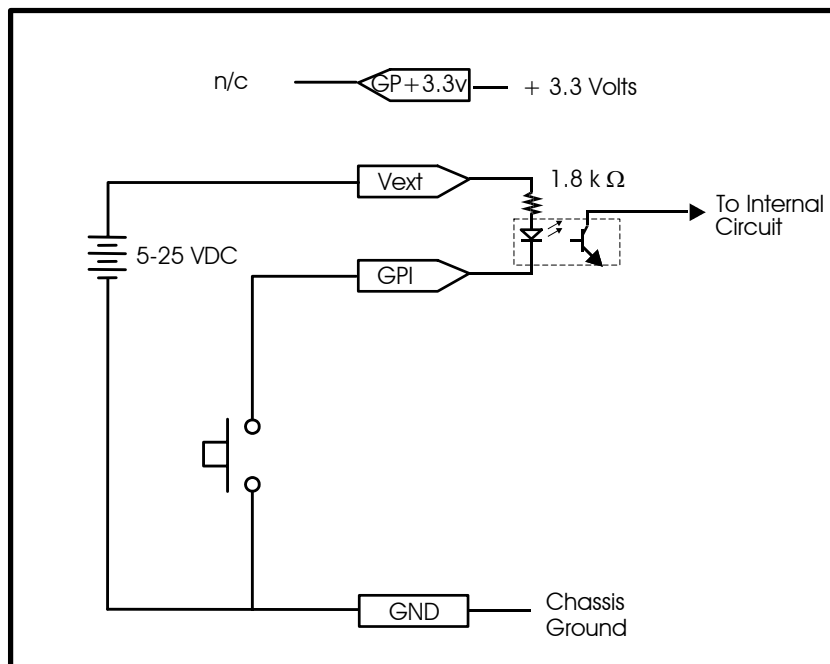
Figure 2-6: Powering the General Purpose Input Opto Isolators from an External Power Supply
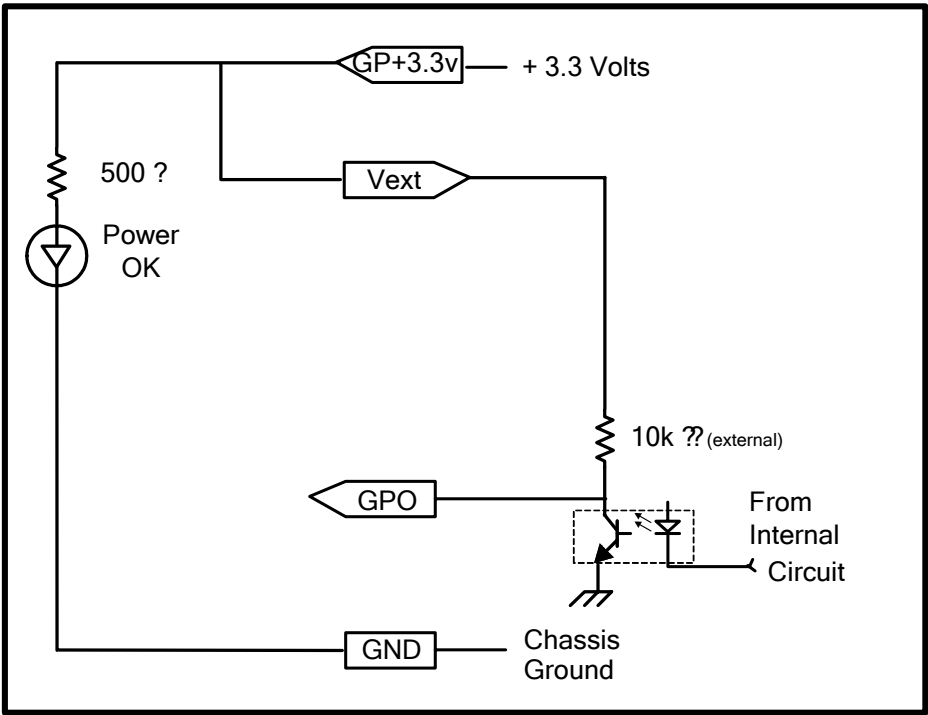
Figure 2-7: Powering the General Purpose Output Opto Isolators from the Unit
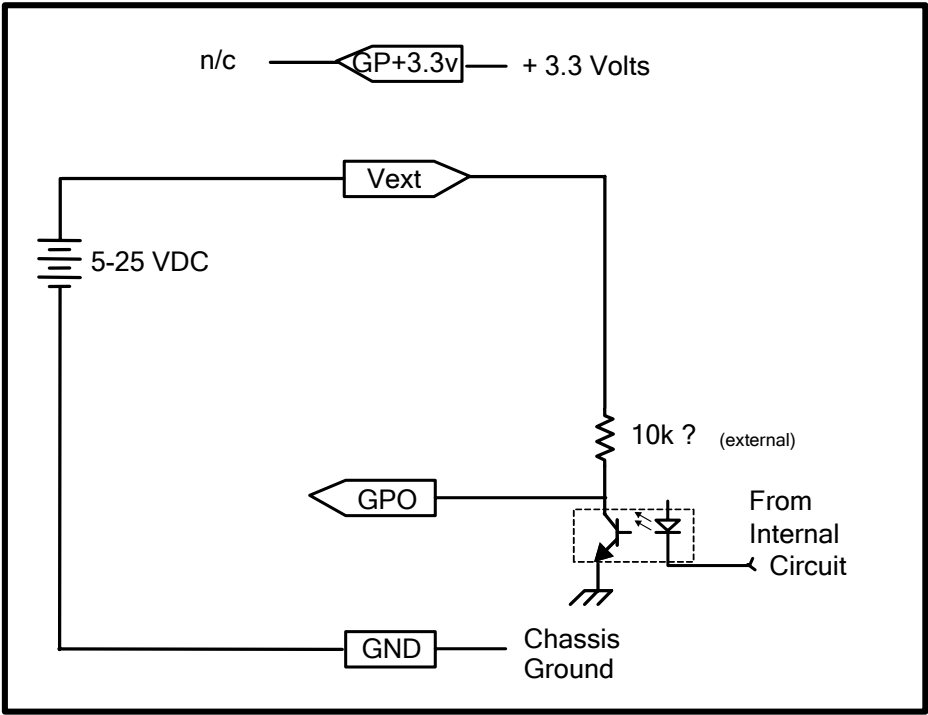
Figure 2-8: Powering the General Purpose Output Opto Isolators from an External Power Supply

Table 2-9 shows the maximum limits that the user must adhere to so that no circuitry is damaged.

Description	Name	Value
Maximum GP+3.3V current load	$I_{GP+3.3V}$ max	100 mA
Minimum input voltage for a high	V_{gpi} high min	3 V
Maximum input voltage for a low	V_{gpi} low max	0.8 V
Maximum GPO sink current	I_{gpo} max	25 mA

Table 2-9: GPIO Maximum Ratings

All GPI inputs are level triggered. Lowering the GPI input to a potential below Vext will select the allocated preset definition. When one of the GPI inputs is activated, the corresponding function is executed. If multiple inputs are active both commands are ignored until a single input is recognized.

The GPI functions are programmable using the *GPI Setup* menu item on the *PRESET* menu. (See section 3.8.1).

2.10. CONNECTING THE OPTIONAL TEMPERATURE PROBE

The 9625LG Series Keyer is available with an optional temperature probe that is used to input data for display in a temperature logo. Consult the temperature probe manual for information on installing the temperature probe. Connect the temperature probe power adapter to the probe unit. Connect the temperature probe to the **COM D**, **SERIAL CONTROL (C)**, or **COM E (NET)** connector on the Keyer unit. Alternatively, you can also connect the temperature probe via the virtual serial port (COM E) by using a serial to Ethernet adapter (see section 2.10.1). The temperature probe ships with an adapter cable to convert its RJ45 connector to a standard 9 pin D connector. The RJ45 plugs into the temperature probe. You will need to create a straight through 9 pin male to female cable of the desired length according to the diagram in Table 2-10 to connect the probe to the Keyer unit. The serial port on the keyer unit must be set for RS-232 operation as described in section 2.1.5.

> **The temperature probe cable should not exceed 1000 feet.**

In order for the temperature probe to communicate to the Keyer unit you must configure the **SERIAL CONTROL C**, **COM D**, or **COM E (NET)** port for the correct protocol and baud rate. The *Serial Control, COM D* or *COM E (net)* menu items on the *General* menu is used to accomplish this (depending on which communications port is used for the temperature probe). Set this menu item to *Temperature* in order for the temperature probe to communicate to the Keyer unit. See section 3.6.5 for information on setting the serial port protocol.

2.10.1. Connecting the Optional Temperature Probe Via Ethernet (Com E)

Newer firmware for the 9625LG Series Keyers contains a new virtual serial port (COM E). This serial port is enabled on the Ethernet connector and requires a valid network connection to an Ethernet enabled device for functionality. Evertz does not recommend any particular brand of serial to Ethernet adapter, however the Lantronix UDS-10 has been tested and confirmed to work with the 9625 series products.

To connect the virtual serial port of the unit to the desired device, you must first select the COM E (net) menu item under the GENERAL menu items of the unit setup menu. Press **SELECT** to enter COM E (net) submenu and use the up and down arrows to scroll through the list of available protocols that can be allocated to the port. For our example we will be using the Temperature Probe configuration. First, scroll to the Temperature option and press the **SELECT** button. The front panel should now show an **E** on the far right beside the Temperature protocol selection. This indicates that the protocol for communicating with the temperature probe is now allocated to the virtual port E. This concludes the configuration on the 9625 Unit.

Next you must install and configure the Lantronix or other serial to Ethernet adapter. In order to do this, you must either connect to the device using the device's Telnet Server, or connect a communications program (such as Hyperterminal) to the serial side of the device. It's usually easier to use the Hyperterminal mode on the serial side, as the default IP address of the unit will probably not match you network configuration. Refer to the Lantronix manual for configuring the device.

Basically you need to get the Lantronix onto your network with a valid IP. You need to tell the device what IP to send the serial information to (this would be the IP address of the 9625 unit) and what Ethernet port to make the connection on (3001). And finally configure the Lantronix device to accept the serial data in the correct format. This will include setting such things as baud rate (1200 for the temp probe), flow control (00) etc. See below for all the parameters required.

A good test for connectivity is to use a PC on the network to ping the IP address of the 9625 unit and the IP address of the Lantronix device. If you can't ping either device, the network is not configured properly. Also be sure the IP addresses used are unique on the network. If you get a ping response and the connection still doesn't seem to be working, try unplugging the devices from the network and pinging again. If you still get a ping response, there is another device somewhere on the network with the same IP.

We have also tested the Lantronix device with the TFT and Sage decoders, both work correctly. You should also be able to configure automation to run on the virtual port, however TCP/IP traffic does not guarantee frame accurate control. **We recommend that automation be connected to a dedicated serial port and not the virtual port.** See section 4 of the Lantronix manual for details.

Remote IP Address should be set to the IP address of the 9625 unit.
Remote IP Port should be set to 3001 (for Com E).
Connect mode should be set to 05.

If one end loses power and the other doesn't, expect some delay before the system can recover. Here is the output from the telnet setup session (new values are entered after the question marks). The IP addresses used here are examples only. Consult your network administrator for appropriate IP addresses for your configuration.

*** **basic parameters for the Temperature Probe**
Hardware: Ethernet Autodetect
IP addr - 0.0.0.0/DHCP/BOOTP/AutoIP, no gateway set
DHCP device name : not set
***************** Security *****************
SNMP is enabled
SNMP Community Name:
Telnet Setup is enabled
TFTP Download is enabled
Port 77FEh is enabled
Web Server is enabled
Enhanced Password is disabled
***************** Channel 1 *****************
Baudrate 1200, I/F Mode 4C, Flow 00
Port 03001
Remote IP Adr: 192.168.008.123, Port 03001
Connect Mode : 05 Disconn Mode: 00 Disconn Time: 00:00
Flush Mode : 77
***************** Expert ******************
TCP Keepalive : 45s
Change Setup : 0 Server configuration
1 Channel 1 configuration
5 Expert settings
6 Security
7 Factory defaults
8 Exit without save
9 Save and exit Your choice 1
Baudrate (1200)
I/F Mode (4C)
Flow (00)
Port No (03001)
ConnectMode (05)
Remote IP Address : (192) .(168) .(008) .(123)
Remote Port (03001)
DisConnMode (00)
FlushMode (77)
DisConnTime (00:00):
SendChar 1 (00)
SendChar 2 (00)
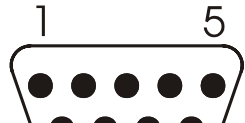
9625LG Series Keyer End				Temperature Probe End		
	9 pin D Male	**Pin**	**Belden 9729**	**9 pin D Female**	**Pin**	
		1			1	
	TxD	2	-------1a------	RxD	2	
	RxD	3	-------1b------	TxD	3	
		4		Rx Gnd	4	
	Gnd	5	---drain 1----	Gnd		
		6			6	
		7			7	
	Power +V	8	-------2a------	Power +V	8	
		9			9	
	Frame Gnd	Shield	---drain 2----	Frame Gnd	Shield	

1   5
MALE
6   9

5   1
FEMALE
9   6

Table 2-10: Temperature Probe Extender Cable

CHAPTER 3
TABLE OF CONTENTS

Figures

Tables

This page left intentionally blank

3. HOW TO OPERATE THE KEYER USING THE RACK MOUNT CONTROL PANEL

The standard 9625LG Series Keyer is a 1 RU chassis with an integrated front control panel. The 9625LG Series Keyer is also available as a 1RU chassis with a separate 1RU rack mountable or desktop remote control panel. This chapter describes the operation of the 9625LG Series Keyer using either the integrated control panel or the rack mount control panel. For information about controlling the 9625LG Series Keyer using the desktop control panel see section 4. For information about connecting the remote control panel to the 9625LG Series Keyer electronics see section 2.4.

When the 9625LG Series Keyer is fitted with the compact flash (+CF) option a different front panel is fitted on the main electronics unit. This front panel provides access to insert the compact flash memory device to allow you to quickly add or remove logos or audio clips to the system.

3.1. AN OVERVIEW OF KEY AND DISPLAY FUNCTIONS
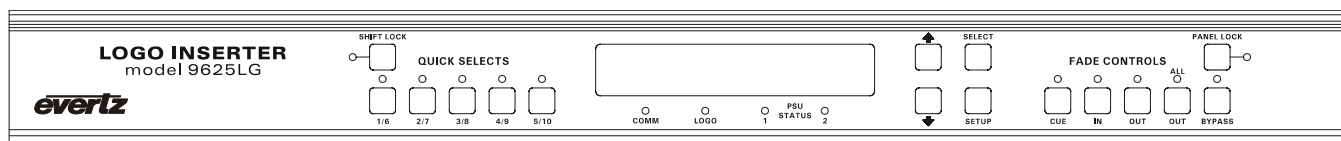
Figure 3-1: 9625LG - Front Panel Layout
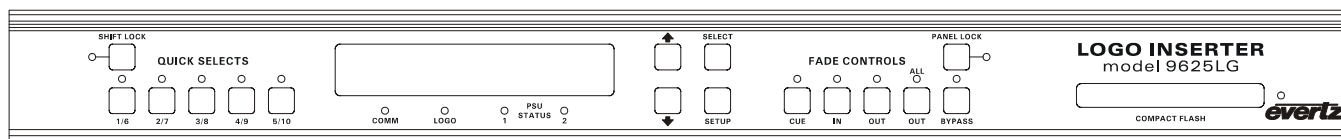
Figure 3-2: 9625LG with Compact Flash - Front Panel Layout
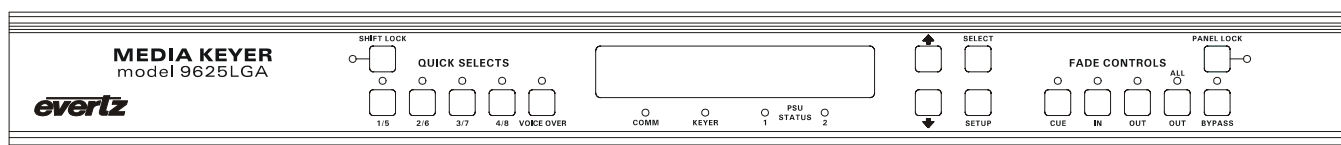
Figure 3-3: 9625LGA - Front Panel Layout
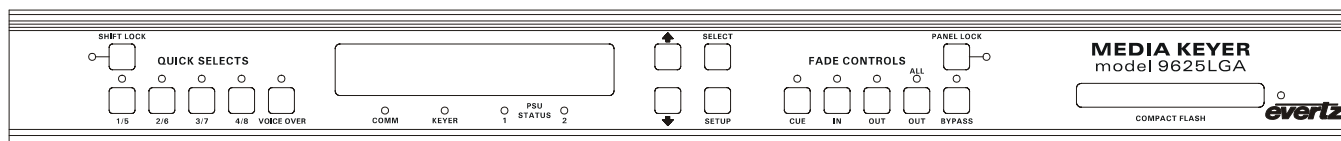
Figure 3-4: 9625LGA with Compact Flash - Front Panel Layout

Figure 3-1 to Figure 3-4 show the front panels for the standard definition keyer units. The high definition units' front panels are identical to the standard definition units except for the model number. The front panel controls consist of a 16 digit alphanumeric display, 16 buttons and 16 LED status indicators.

The buttons are used to provide control of the 9625LG Series Keyer, to switch the various input sources, and to navigate the front panel *Setup* menu system, a quick and simple method of configuring the 9625LG Series Keyer for your application.

Throughout this chapter the term *Media Item* means logo, audio clip or a playlist that associates a logo and audio clip.

3.1.1. Fade Button Group

CUE   This button is used to load a media item into the media keyer memory making it immediately available for fade in. If the media item is not currently loaded into memory, a progress indicator will appear to the right of the logo name while it is loading into memory. Cueing a media item allows it to be viewed on the preview output buss before it is faded in. If the LED is illuminated, the media item has been cued.

          Cued animations are loaded into memory and paused on the first frame of the animation until the Fade In command is received. Cued logos may be moved horizontally and vertically on the preview output. Gain level setting changes are visible on the preview output channels. Cued logos will repeat their fade in, hold and fade out sequence over and over again on the preview output. On Media Keyer units, audio clips will play over and over again. If you cue a playlist item on a Media Keyer, the logo and its associated audio clip will both be cued. This allows you to preview the entire logo and audio clip quickly and easily before placing it on air.

IN   This button is used to *fade in* the currently selected media item onto the Program output channels. Logos are keyed on the program output at their Gain level settings. If the media item has not been previously cued, it must be loaded into memory before it can be faded in. This process may take a few seconds while the item is being cued. If the media item is not currently loaded into memory, a progress indicator will appear to the right of the logo name while it is loading into memory. If you fade in a playlist item on a Media Keyer, the logo and its associated audio clip will both be faded in. If the LED is illuminated, the media item has been faded in. The media item name will flash on the front panel display indicating that it is *faded in.*

OUT   This button is used to *fade out* the currently selected media item from the Program output channels. If you fade out a playlist item on a Media Keyer, the logo and its associated audio clip will both be faded out. If the LED is illuminated, the media item has been faded out. The media item name will stop flashing on the front panel display indicating that it is *faded out.*

ALL OUT This button is used to *fade out* all media items from the Program output channels. If the LED is illuminated, all media items have been faded out.

SELECT   When you are not in the *Setup Menu*, this button controls whether the selected media item shown on the front panel display is present on the Program output buss. Scroll to the media item required using the ⬆ & ⬇ buttons. If the media item is currently faded in its name will flash in the front panel display and the IN LED will be On. To fade the media item in, press the **SELECT** button. The media item will fade in according to its programmed fade in time and the media item name display will begin flashing. If the media item is not currently loaded into memory, a progress indicator will appear to the right of the logo name while it is loading into memory. To remove a media item from the output video busses, press the **SELECT** button when the media item name is flashing. The media item will fade out according to its programmed fade out time and its name display will stop flashing.

3.1.2. The Quick Select Button Group

QUICK SELECT   These buttons are used as a quick method to *fade in* and *out* often used media items. On the Logo Inserters you can access up to 10 logos using the quick select keys. On the Media Keyers you can access up to 8 media items. Each button can access two different media items depending on the state of the **SHIFT LOCK** LED. When the **SHIFT LOCK** LED is Off, the **QUICK SELECT** button access the lower numbered *Quick Select.* When the **SHIFT LOCK** LED is On the **QUICK SELECT** button access the higher numbered *Quick Select.*

Pressing the **QUICK SELECT** button once fades the assigned media item in. Pressing the **QUICK SELECT** button once again fades the assigned media item out. When a *Quick Select* is active the LED above the button is On. The LED's above each button are used to indicate the status of two *Quick Selects.*

To assign a media item to a *Quick Select*, scroll to the media item in the display window using the ⬆ & ⬇ buttons. Then press and hold the desired **QUICK SELECT** button for 3 seconds. Remember to press the **SHIFT LOCK** button first to access the higher numbered *Quick Selects.* Release the button and the item is assigned to the button.

SHIFT LOCK   To access the second bank of *Quick Selects* press the **SHIFT LOCK** button. The LED to the left of the button is On to indicate that *Shift Lock* is on and that the higher numbered *Quick Selects* are available. To turn *Shift Lock* off press the **SHIFT LOCK** button once again. The LED to the left of the button is Off to indicate that *Shift Lock* is off and that the lower numbered *Quick Selects* are available.

3.1.3. The Function Button Group

PANEL LOCK   This button will lock the front panel controls so that changes cannot be made. The **PANEL LOCK** LED will turn On indicating that the front panel buttons are disabled. When any of these buttons are pressed, the front panel display will show the message `Panel Locked` for a few seconds. Pressing the **PANEL LOCK** button again will return the front panel keys to their normal functions and the LED key will go Off indicating that the front panel controls are active.

!   The 9625LG Series Keyers may still be controlled from the GPI inputs or the automation when the front panel is Locked.

VOICE OVER   This button (only available on the Media Keyer units) will mix the Voice over audio with the background (program) audio. The *HTML Audio Setup* page is used to configure which inputs will be treated as background audio and which inputs are treated as Voice Over Audio. (See section 3.13.1)

BYPASS   This button controls the bypass relays (optional on high definition units). The LED indicates that the unit is in manual *Bypass* mode when it is On. When the unit is in *Bypass* mode, the program input video is directly connected to the FILL video output. On the Media Keyers, the AES PROG inputs are directly connected to the AES PROG outputs. The other outputs will not have any signals on them. The unit will revert to *Bypass* mode in the event of a power loss also.

3.1.4. Setup Button Group

SETUP   This button is used to enter *Setup* menu that is used to configure the operating modes of the 9625LG Series Keyer. (See section 3.3 for an overview of the *Setup* menu.) When you are in the *Setup* menu, this button is also used to back out of menu selections to the next higher menu level or to exit the *Setup* menu and return to normal panel operation.

SELECT   When in the *Setup* menu, this button is used to choose a submenu and navigate to the next level down in the menu structure. When you are at the bottom level of the menu system it can also accept numeric values to make the displayed menu choice the active value for that menu item. When not in the *Setup* menu, this button is also used to fade logos in and out on the selected output buss. (See section 3.1.1)

↑, ↓   When in the *Setup* menu, the ↑ and ↓ arrow keys are used to move to various items at the current menu level in the menu system. The ↑ and ↓ arrow keys are also used to enter numeric values for menu choices at the bottom level of the menu system.

When not in the *Setup* menu, the ↑ and ↓ arrow keys are used to select a logo to display.

3.1.5. Control Panel Status Indicators

3.1.5.1. Fade Status Indicators

CUE This LED indicates that the media item displayed on the front panel is loaded into memory and available on the Preview output buss.

IN This LED indicates that the media item displayed on the front panel is faded in and available on the Program output buss. The media item name will also be flashing.

OUT This LED indicates that the media item displayed on the front panel is faded out and not available on the Program output buss. The media item name will not be flashing.

ALL OUT This LED indicates that all media items are faded out from the Program output buss.

LOGO, KEYER This LED (labelled LOGO on Logo Inserters and KEYER on Media Keyers) indicates that at least one media item is faded in and available on the Program output buss.

3.1.5.2. Quick Select Status Indicators

QUICK SELECT These LEDs indicate that the corresponding *Quick Select* is active, and the media item associated with it is faded in.

SHIFT LOCK This LED indicates that the *Shift Lock* is active and the higher numbered *Quick Selects* are being referenced by the **QUICK SELECT** LEDs and buttons.

3.1.5.3. Function Status Indicators

PANEL LOCK This LED indicates that the *Panel Lock* function is active and the remainder of the front panel buttons are disabled.

VOICE OVER This LED (only available on Media Keyer units) indicates that the audio mix function of the media Keyer is enabled when it is On.

BYPASS This LED indicates that the unit is in *Bypass* mode when it is On. When it is Off it indicates that the unit is in normal operating mode.

COMM This LED is used to signal two types of communication to the 9625LG Series Keyer. When it is flashing On approximately every 1.5 seconds, that indicates that the control panel is communicating with the main microprocessor in the unit. When the 9625LG Series Keyer is under automation control, or logos or other media files are being transferred to or from the unit using the Nomad™ or Overture™ software, the LED will be on when the unit is receiving data from the control source.

If it is Off continuously that means that the control panel has lost communications with the main unit. In that case check the cabling if you are using a remote control panel. Otherwise the unit may require a reboot if the control buttons on the control panel are not responding.

3.1.6. Electronics Unit Status Indicators

PSU STATUS 1, 2   These green LEDs indicate that the corresponding power supply is functioning normally. On units fitted with a single power supply the **PSU STATUS 2** LED will be Off all the time. These LEDs are the only ones present on the electronic units of the remote control versions.

3.1.7. Front Panel Display Functions

The 16 character alphanumeric display is used to show the name of the logo that will be cued, faded in or out by pressing the **CUE, SELECT**, **IN** or **OUT** buttons. The display is also used to show the *Setup* menu items to configure the 9625LG Series Keyer unit.

3.2.   OVERVIEW OF FRONT PANEL OPERATION

Scroll to the media item required using the ⬆ & ⬇ buttons. If the media item is currently faded in its name will flash in the front panel display. To load a media item into memory and display it on the preview buss, press the **CUE** button. To fade in a media item on the program buss, press the **SELECT** or **IN** button. The media item will fade in according to its programmed fade in time, the **IN** LED will be On and the media item name display will begin flashing. If the media item is not currently loaded into memory, a progress indicator will appear to the right of the media item name while it is loading into memory. To fade out a media item from the output buss, press the **SELECT** or **OUT** button when the logo name is flashing. The media item will fade out according to its programmed fade out time. The **OUT** LED will be On and the media item name display will stop flashing. To remove all media items from the output video buss, press the **ALL OUT** button.

3.3.   AN OVERVIEW OF THE SETUP MENU SYSTEM

The *SETUP* menu system uses the 16 digit alphanumeric display and provides a quick, intuitive method of configuring the 9625LG Series Keyer. These items are often only required to be set up at installation time, and do not pertain to the day-to-day operation of the unit. Figure 3-5 provides an overview of the *Setup* menu system.

3.4.   NAVIGATING THE SETUP MENU

To enter the *Setup* menu, press the **SETUP** button. This will bring you to the main *Setup* menu where you can use the ⬆ & ⬇ buttons to move up and down the list of available sub-menus. Top level menu items are shown in UPPERCASE. Once you have chosen the desired sub-menu, press the **SELECT** button to select the next menu level.

Once in a sub-menu, there may be another menu layer (shown in Title Case), or there may be a list of parameters to adjust (shown in lower case). If there is another set of menu choices, use the ⬆ & ⬇ buttons to select the desired menu item and press the **SELECT** button. Continue this process until you get to the bottom of the menu tree where the list of parameters to be adjusted is shown.

To adjust any parameter, use the ⬆ & ⬇ buttons to move up or down the parameter list to the desired parameter. To view the possible values for that item, press the **SELECT** button. The current value for that parameter will be shown with an asterisk (*). Pressing the ⬆ & ⬇ buttons allows you to show the

possible values for the selected parameter. The various parameter values that are not currently selected will NOT have an asterisk (*). When you have stopped at the desired value, press the **SELECT** button to save your selection. The value will be shown with an asterisk (*), indicating that it is now the current value. To move up one level in the menu press the **SETUP** button.

You can select other parameters from that submenu by using the ⬆ & ⬇ buttons, followed by the **SELECT** button. Alternately you can move up one menu item by pressing the **SETUP** button.

Once you have made all the desired changes, press the **SETUP** button one or more times until you return to the top of the Menu tree and exit the *Setup* menu.

Each of the menu items, with function explanations, are described in the following sections.

GENERAL
– **Select Standard**
– **Reference Setup**
– **Update Code**
– **Output Mode**
– **Time Setup**
– **Network Info**
– **Serial Control**
– **COM D**
– **COM E (net)**
– **Line 21 Protect**
– **Up Down Timer**
– **Automation Debug**
– **M2100 Auto Debug**

MANAGE FILES
– **Media**
– **File**
– **To**
– **Copy**
– **Delete**
– **Format**

PRESETS
– **GPI Setup**
  – **GPI**
  – **CAction**
  – **OAction**
  – **Logo**
GPO Setup

EAS
– **Type**
– **V**
– **Font**
– **Font Hei**
– **Rate**
– **Warning BG**
– **Warning FG**
– **Watch BG**
– **Watch FG**
– **Test BG**
– **Test FG**

MEDIA (LOGO)
 (Crawl Logos)
– **H Position**
– **V Position**
– **Logo Gain**
– **Fade In Time**
– **Hold Time**
– **Fade Out Time**
– **Crawl Rate**
– **Crawl Repeat**
– **Crawl Pause**
– **Crawl Height**
– **Crawl Font**
– **BG Opacity**
– **FG Opacity**
– **Crawl BG**
– **Crawl FG**

MEDIA (LOGO)
 (Static Logos)
– **H Position**
– **V Position**
– **Logo Gain**
– **Fade In Time**
– **Hold Time**
– **Fade Out Time**

MEDIA (LOGO)
 (Animated Logos)
– **H Position**
– **V Position**
– **Logo Gain**

MEDIA
 (Audio Clips)
– **CL config**
– **CL Repeat**

MEDIA
 (Playlists)
– **LN (Logo Name)**
– **AN (Audio Name)**

AUDIO OVER TRANS
– **VO In Rate**
– **VO Out Rate**

TEMPERATURE
– **Temp Source**
– **Temp Format**
– **Set Temperature**

Figure 3-5: Overview of the Setup Menu

3.5. FRONT PANEL SETUP MENU – MAIN MENU

The Front panel *Setup* menu is arranged in a layered structure that groups similar configuration items together. The following section provides a brief description of the first level of menus that appear when you enter the menu. Selecting one of these items will take you to the next menu level. Sections 3.6 to 3.10 provide detailed descriptions of each of the sub-menus. The tables in these sections are arranged in an indented structure to indicate the path taken to reach the control. Menu items or parameters that are underlined indicate the factory default values.

GENERAL	This menu is used to set up the video standard, COM ports, network address, time and other miscellaneous settings. It is also used to update firmware.
MANAGE FILES	This menu is used to manage logos and other media files – to copy them from one media device to another, to delete them, etc.
PRESET	This menu is used to configure the General Purpose inputs and outputs
EAS	This menu is used to configure the EAS crawl functions – speed, position, font type and height, and colours (only on EAS optioned units)
MEDIA	This menu is used to position logos and to set their fade in, hold and fade out time
AUDIO OVER TRANS	This menu is used to set the voice over transition fade in and fade out rates. (Media Keyers only – 9625LGA)
TEMPERATURE	This menu is used to configure parameters relating to the temperature, which is displayed in a temperature logo.

3.6.   GENERAL CONFIGURATION ITEMS

The *GENERAL Setup* menu is used to set up various items related to the overall operation of the 9625LG Series Keyer, such as Video standard, Time settings, Network info, COM port settings and firmware versions. Table 3-1 shows the items available in the *GENERAL Setup* menu. Sections 3.6.1 to 3.6.9 provide detailed information about each of the sub-menus.

Select Standard	Sets the video standard
Reference Setup	Selects whether the timing reference will be the Input video or Genlock
Update Code	Displays the current firmware version and initiates firmware upgrades
Output Mode	Selects the Logo Insert or Logo Key and Fill mode
Time Setup	Configures the real time clock and LTC timecode input
Network Info	Configures the Ethernet Network Address for FTP uploads
Serial Control	Configures the function of the SERIAL CONTROL C serial Port
COM D	Configures the function of the COM D serial Port
COM E (net)	Configures the function of the virtual serial port (COM E)
Line 21 Protect	Controls whether logos can be placed on Line 21
Up Down Timer	Configures the two up/down timers for time logos
Automation Debug	Debugging tool for the Evertz automation protocol
M2100 Auto Debug	Debugging tool for the M2100 automation protocol

Table 3-1: Top Level of the General Setup Menu

3.6.1. Selecting the Video Standard

GENERAL
Select Standard
525I
16x9 525i
625i

The *Select Standard* menu item is used to set the video standard in use.

Select *525i/59.94* for operation with 4 x 3 aspect ratio 525i/59.94 video conforming to SMPTE 125M.

Select 16x9 *525I* for operation with 16 x 9 aspect ratio 525i/59.94 video conforming to SMPTE 125M. This setting is used where the picture has been anamorphically compressed into a 4 x 3 raster.

Select *625i/50* for operation with 4 x 3 aspect ratio 625i/50 video conforming to EBU TECH 3267-E.

3.6.2. Configuring the Video Timing Reference

GENERAL
Reference Setup
Type: In Video
Type:In Genloc

The *Reference* Setup Type menu item is used to select the timing reference for the 9625LG Series Keyer. This menu item is not available on early HD9625LG units.

Select *In Video* to use the SDI video connected to the INPUT BNC as the timing reference.

Select *In Genloc* to use the analog video connected to the REF IN BNC as the timing reference.

GENERAL
Reference Setup
H: 0 to max samples

This menu item allows you to set the horizontal timing of the output video with respect to the reference input. Setting this control to 0 keeps the output video in time with the reference.

Increasing the value will delay the output video in one-sample increments.

GENERAL
Reference Setup
V: 0 to max lines

This menu item allows you to set the vertical timing of the output video with respect to the reference input. Setting this control to 0 keeps the output video in time with the reference.

Increasing the value will delay the output video in one-line increments.

> ⚠ **!** **The *H and V Phase Offset* adjustment is a REAL TIME ADJUSTMENT and will affect the output video timing immediately. These settings should not be adjusted when the output video is in the broadcast chain.**

3.6.3. Configuring the Real Time Clock

The 9625LG Series Keyer contains a real time clock that is used to drive the clock display logos that can be placed on the screen. This battery backed up real time clock (known as RTC) free runs on an internal oscillator and can be set from the front panel. When the 9625LG Series Keyer is powered up with a valid video input, a separate clock (known as the UTC) is initialized from the RTC and maintains Universal Co-ordinated time (UTC) accurately from the video input so that it will not drift. The 9625LG Series Keyer automatically updates the RTC clock from the UTC clock to minimize long-term time drift. In order to keep the UTC clock in sync with your house master time code it should also be locked to incoming linear time code connected to the LTC IN connector. The UTC clock time is internally maintained as Universal Co-ordinated time (UTC), but it can also be adjusted for time zone offsets from UTC and for daylight saving time, and displayed as local time (Local). The *Time Setup* sub-menus of the *General* setup menu are used to configure the real time clock and display the UTC and Local times.

3.6.3.1. Displaying the Local Time

GENERAL
Time Setup
Local 12:34:50

This menu item is used to display the clock time as local time. (UTC time adjusted for the time zone offset and DST adjustment) The time displays are always shown in the 24-hour time format.

3.6.3.2. Displaying the UTC Time

GENERAL
Time Setup
UTC 12:34:50

This menu item is used to display the UTC time clock. The time displays are always shown in the 24-hour time format.

3.6.3.3. Setting the Real Time Clock

GENERAL
Time Setup
RTC 12:34:50

This menu item is used to display and set the hardware real time clock in the 9625LG Series Keyer. The time displays are always shown in the 24-hour time format.

When you press the **SELECT** button, the display shows the current real time clock time which will look similar to the following:

```
12:34:50
```

To set the real time clock press the **SELECT** button and the hours digits will be flashing to indicate that they are in entry mode. Use the ↑ or ↓ buttons to change the hours to the desired value. Then press the **SELECT** button and the minutes digits will be flashing to indicate that they are in entry mode. Set the minutes and seconds in the same way. When you have entered the correct time, press the **SELECT** button to update the hardware real time clock. The seconds digits will stop flashing and the time will begin incrementing indicating that the Real Time Clock has been set. When you set the hardware real time clock the UTC clock time will automatically be adjusted.

> **When there is a valid LTC input to the 9625LG Series Keyer, the LTC time will overwrite the Real Time clock that has been entered.**

3.6.3.4. Setting the Time Zone Offset

GENERAL
Time Setup
Zone -05:00:00

This menu item allows the user to set a time zone offset between the UTC time and the Local time. This time zone offset will be added to the UTC time along with the Daylight Saving time correction (see section 3.6.3.5) to obtain the Local time. Time zones are normally in one hour or 30 minute increments and can be + or – from UTC. (Time zones east of Greenwich are +, and time zones west of Greenwich are -)

To set the time zone press the **SELECT** button and the hours digits will be flashing to indicate that they are in entry mode. Use the ↑ or ↓ buttons to change the hours to the desired value. To set negative time zone offsets continue pressing the ↑ or ↓ buttons until the hours values show a negative sign. Then press the **SELECT** button and the minutes digits will be flashing to indicate that they are in entry mode. Set the minutes and seconds in the same way. When you have entered the correct time press the **SELECT** button to the set the time zone offset. The seconds digits will stop flashing to indicate that the time zone offset has been set.

3.6.3.5. Enabling Daylight Saving Time Compensation

GENERAL
Time Setup
DST Active
off
on

This menu item allows the user to control whether Daylight Saving Time (DST) compensation will be applied to derive the local time.

When set to *off*, Daylight Saving Time compensation will not be applied.

When set to *on* Daylight Saving Time compensation will be applied and the local time will be adjusted back by 1 hour.

✍

The 9625LG Series Keyer must be manually changed from Daylight Saving time to Standard time using this menu setting. If you want to automatically keep the time clock in the 9625LG Series Keyer in sync with the correct local time, connect a source of linear time code that contains local time to the LTC IN connector. See section 3.6.3.6

3.6.3.6. Selecting Whether the Time Code input is UTC or Local Time

GENERAL
Time Setup
LTC Time Zone
Ltc zone : Local
Ltc zone : UTC

This menu item allows the user to select whether incoming time code will be in UTC or local time. This information is necessary to correctly update the RTC clock from the time code.

Select *UTC*, when the incoming LTC is Universal Co-ordinated time.

Select *Local*, when the incoming LTC is local time.

3.6.3.7.   Setting the LTC Date Format

GENERAL
Time Setup
LTC Date Encode
Auto
Skotel

This menu item is used to select the format of the date encoded in the user bits of the LTC. For Skotel time code generators, choose *Skotel.* For all other time code generators choose *Auto.*

3.6.3.8.   Setting the Real Time Date

GENERAL
Time Setup
RDate 00:12:30

This menu item is used to display and set the real time date in the keyer.

When you press the **SELECT** button, the display shows the current real time date in yy:mm:dd format.

To set the date, press the **SELECT** button and the year digits will be flashing to indicate that they are in entry mode. Use the ↑ or ↓ pushbuttons to change the year to the desired value. Then press the **SELECT** button and the month digits will be flashing to indicate that they are in entry mode. Set the month and day in the same way. When you have entered the correct date press the **SELECT** button to update the real time date. When you set the real time date the UTC date will automatically be adjusted.

✎ | **When there is a valid LTC input to the keyer with the date encoded in the userbits, the LTC date will overwrite the Real Time date that has been entered.**

3.6.3.9.   Displaying the UTC Date

GENERAL
Time Setup
UDate 00:12:30

This menu item is used to display the UTC date in yy:mm:dd format.

3.6.3.10.   Displaying the Local Date

GENERAL
Time Setup
LDate 00:12:30

This menu item is used to display the local date, which is the UTC date adjusted by the time zone in yy:mm:dd format.

3.6.3.11. Synchronising the Real Time Clock to the UTC Time

```
GENERAL
   Time Setup
      Jam RTC from UTC
         SELECT =
         Confirm
```

The hardware real time clock (RTC) will drift slightly from the video rate UTC Clock time under normal operation. When this drift exceeds 5 seconds the RTC will be automatically resynchronized to the UTC time. This menu item allows the user to synchronize the RTC to the UTC Clock time immediately.

To synchronize the RTC time immediately, press the **SELECT** button when `SELECT = Confirm` is shown on the display.

3.6.4. Setting Up the Network Addresses

The *Network Info* sub-menus of the *General* Setup menu are used to configure the 9625LG Series Keyer for FTP uploads of logos and other media. In most cases you will only have to plug in your Ethernet cable and configure the network IP address (*A*) to contain an unused IP address in the valid range. Entries are made in standard IP address format. Please consult your Network administrator for IP address allocations, netmask and gateway requirements.

To set the various *Network Info* parameters, press the **SELECT** button when the desired parameter is shown on the front panel display (indicated by the letter on the left side of the display). The left group of digits will be flashing to indicate that they are in entry mode. Use the ⬆ or ⬇ buttons to change this group to the desired value. Then press the **SELECT** button and the next group of digits will be flashing to indicate that they are in entry mode. Set the remaining groups of digits in the same way. When you have entered the correct value for the right group of digits, press the **SELECT** button to set the parameter. The display will stop flashing to indicate that the parameter value has been set.
The settings become active immediately after you return to the *Network Info* menu level. A reboot is not required.

3.6.4.1. Setting Up the IP Address

```
GENERAL
   Network Info
      A 196.168.1.1
```

This menu item sets the unique IP address of the 9625LG Series Keyer within the network. 192.168.1.XXX is an example of an IP address in a private (internal) network. If connecting multiple 9625LG Series Keyers, take care not to use the same IP address for each.

3.6.4.2. Setting Up the Sub Net Mask

```
GENERAL
   Network Info
      M 255.255.255.0
```

This menu item sets the "subnet mask" of the network. Specifically, this parameter outlines all the IP addresses that can communicate with the 9625LG Series Keyer. This parameter is usually set to 255.255.255.0 for a private network. Normally you will not have to adjust this parameter from its default value.

3.6.4.3. Setting Up the Gateway

```
GENERAL
  Network Info
    G 192.168.1.1
```

This menu item identifies the IP address of the "gateway" (commonly referred to as the "firewall"). In its simplest sense the gateway could be the PC directly connected to the 9625LG Series Keyer and running the network application software (i.e. InstaLogo™ or Nomad™ or Overture™). In a private network, this gateway could be identified as 192.168.1.YYY. Normally you will not have to adjust this parameter from its default value.

3.6.4.4. Displaying the Ethernet Hardware Address

```
GENERAL
  Network Info
    0:2:C5:01:03:E2
```

This menu item displays the Ethernet hardware address of the unit (which can not be changed).

3.6.5. Setting the Serial Protocol for COM Ports C, D and E

The five serial ports on the 9625LG Series Keyer are used for various functions. The UPGRADE (A) port is used as a console port for upgrading firmware and other utility functions. The REMOTE PANEL (B) port is only available on remote control versions of the 9625LG Series Keyer and is used to connect the remote control panel. The **SERIAL CONTROL (C)** port, **COM D** port and **COM E** virtual port are programmable and can be used for a variety of functions. There are three identical menu items on the *GENERAL* menu that are used to configure the **SERIAL CONTROL (C), COM D** and **COM E** ports. For simplicity only one of these menu items will be shown in the manual. The **COM D** port and menu item are not available on early HD9625LG units.

The virtual serial port (COM E) can be configured for the same functions as ports C and D however it is not recommended to connect an automation system via COM E since TCP/IP traffic does not guarantee frame accurate control.

```
GENERAL
  COM D
    None
    EAS CG
    Temperature
    Automation
    Control Panel
    Console
    M2100_AUTO
    XY_AUTO
```

This menu item allows you to set the communications protocol that will be used on COM port D.

Select *None* to disable the use of the COM D port.

Select *EAS CG* when you have the EAS option (+EAS) enabled and have an EAS decoder connected to port D. See section 5.1 for more information about connecting the EAS decoder. See sections 5.2 and 3.9 for information about configuring the EAS functions of the keyer.

Select *Temperature* when you have the optional temperature probe connected to the port. See section 2.10 for more information about connecting the temperature probe. The temperature is displayed using a preformatted temperature logo, which is created using the InstaLogo™ or Overture™ software. See the InstaLogo™ section of the Keyer Toolkit manual, or refer to the Overture™ manual, or the Temperature Probe addendum (which was shipped with your temperature probe), for information on creating the Temperature logo.

The Control Panel and Console functions are dedicated to ports B, A respectively and cannot be selected for COM D. These items are included for information purposes only.

There are four settings that are used when the keyer is under automation control. See your automation vendor for information about the protocols that are supported.

Select *AUTOMATION* when you want to control the keyer using the Evertz automation protocol. This is the setting you should use when you are controlling the keyer from the Evertz MetaCast software.

Select M*2100_AUTO* when you want to control the keyer using the Grass Valley M2100 switcher automation protocol.

Select *XY_AUTO* when you want to control the keyer using the xy logo inserter automation protocol.

3.6.6. Protecting Line 21 Captions

```
GENERAL
  Line 21 Protect
    L21 prot: No
    L21 prot: Yes
```

This menu item allows the user to control whether logos can be placed on line 21 where closed captions are located in North American television systems. When the video standard is set to one of the 625 line standards, the setting of this menu item is ignored.

When set to *No*, logos can be placed vertically beginning at line 21.

When set to *Yes*, logos can be placed vertically beginning at line 22, preserving any closed caption information that is encoded on line 21.

3.6.7. Setting the Output Mode

```
GENERAL
  Output Mode
    Pvw/Pgm
    Pvw/Key/Fill
```

This menu item allows you to choose the output video style for the logo insertion.

Select *Pvw/Pgm* if you are using your logo inserter as a standard on-air device. In this mode the logo is keyed over the input video according to the associated key information and is available on the **PREV OUT** BNC and the **PROG OUT** BNCs.

Select *Pvw/Key/Fill* if you have a switcher or a downstream keyer that requires a separate key and fill signal. In this mode the logo is keyed over the input video according to the associated key information and is available on the **PREV OUT** BNC. Program Output BNCs will contain the Logo fill data on the **FILL** BNC and the Logo key data on the **KEY** BNC. In this mode you must supply a valid video timing reference signal to the unit. You can provide either an analog video signal into the **REF** input BNC or a serial digital video signal to the **INPUT** BNC. The input signal must be running the same video standard as required by your downstream switcher or keyer. See section 3.6.2 for information on selecting the video timing reference signal.

3.6.8. Viewing and Updating the Firmware Version

```
GENERAL
  Update Code
    1.01 build 100
    boot 1.01
    yes - upgrade now
```

The Firmware menu item allows you to view the firmware version that is installed in the 9625LG Series Keyer. It also enables you to update the firmware.

When you press the **SELECT** button, the display shows the software version which will look similar to the following:

```
1.0 build 100
```

Use the ⬆ or ⬇ buttons to display the boot code version which will look similar to the following:

```
Boot 1.01
```

Select *yes - upgrade now* to upgrade the firmware in the 9625LG Series Keyer. For information on completing the firmware upgrade see section 6.2.

3.6.9. Configuring the Up/Down Timers

The 9625LG Series Keyers have the ability to insert a logo, which displays a count down or count up timer. The *Up Down Timer* menu is used to configure the timers that are used for this purpose. The following is a description of each of the sub-menus.

GENERAL
Up Down Timer
Timer:Timer1
Timer:Timer2

This menu item selects which of the 2 timers the rest of the sub-menu items will affect.

Timer 1 is selected by default. To select Timer 2, press the **SELECT** button and use the ↓ pushbutton to scroll to *Timer2*, then press the **SELECT** button again.

GENERAL
Up Down Timer
Hour: 0

This menu item sets the hours for the timer. It can be set to values from 0 to 23 hours.

To change the value press the **SELECT** button then use the ↑ or ↓ pushbuttons to change the hours for the timer. Pressing **SELECT** again will set the value.

GENERAL
Up Down Timer
Minute: 0

This menu item sets the minutes for the timer. It can be set to values from 0 to 59 minutes.

To change the value press the **SELECT** button then use the ↑ or ↓ pushbuttons to change the minutes for the timer. Pressing **SELECT** again will set the value.

GENERAL
Up Down Timer
Second: 0

This menu item sets the seconds for the timer. It can be set to values from 0 to 59 seconds.

To change the value, press the **SELECT** button and then use the ↑ or ↓ pushbuttons to change the seconds for the timer. Pressing **SELECT** again will set the value.

3.6.11 Automation Debug Functions

Two automation debug functions are provided in the *GENERAL* menu. One is for the Evertz automation protocol and is called *Automation Debug*. The other is for the M2100 automation protocol and is called *M2100 Auto Debug*. Both work in essentially the same way. When you turn on one of the automation debug functions, the data packets being received from the automation system are output to the Upgrade RS-232 serial port. To view the data, use a terminal program with the following settings: baud rate: 57600, data bits: 8, parity: none, stop bits: 2, flow control: none.

These functions are used to view the commands that are being sent by the automation system. If you are having problems with a unit that is being controlled from automation, Evertz service personnel may ask you to provide a capture of the data being output on the serial port when the debug function is turned on.

3.7.   MEDIA MANAGEMENT CONFIGURATION ITEMS

The 9625LG Series Keyer comes standard with a 128 MB internal flash memory for storing logos and other media files. This can be upgraded to 1 GB of internal flash memory. The 9625LG Series Keyer can also be fitted with a removable compact flash expansion drive that can be used with either 128 MB or 1 GB compact flash memory cards. The *MANAGE FILES Setup* menu is used to set up various items related to the moving logo files between these different media drives. Table 3-2 shows the items available in the *MANAGE FILES Setup* menu. Sections 3.7.1 to 3.7.6 provide detailed information about each of the sub-menus.

Media	Selects the source media for the file operation
File	Selects the media file for the file operation
To	Selects the destination media for the file operation
Copy	Copies the media *File* from the *Source* to the *Destination* media
Delete	Deletes the media *File* from the *Source* media
Format	Erases the *Destination* media

Table 3-2: Top Level of the Manage Files Setup Menu

3.7.1. Selecting the Source Media

| MANAGE FILES |
| Media |
| [serial number] |

This menu item is used to select the source media drive that you are working with. Each media drive is identified by the serial number of the compact flash media that is currently in the drive. Units that are not fitted with one of the compact flash expansion drive will only have 1 item in this list.

Use the ↑ or ↓ buttons to display the serial number of the media that will be the source for the file operation and press the **SELECT** button.

3.7.2. Selecting the Media File Name

| MANAGE FILES |
| File |
| file name |

This menu item is used to select the file name of the logo or other media file that you want to perform the file operation on.

Use the ↑ or ↓ buttons to display a list of all the media files on the drive selected with the *Media* menu item. When you have selected the desired media file press the **SELECT** button.

3.7.3. Selecting the Destination Media

| MANAGE FILES |
| To |
| [serial number] |

This menu item is used to select the destination media drive that you are working with. Each media drive is identified by the serial number of the compact flash media that is currently in the drive. Units that are not fitted with one of the compact flash expansion drives will only have 1 item in this list.

Use the ↑ or ↓ buttons to display the serial number of the media drive that will be the destination for the file operation and press the **SELECT** button to choose the displayed item.

3.7.4. Copying a File from one Drive to Another

| MANAGE FILES |
| Copy |

This menu item is used to make a copy of the file specified by the *File* menu item from the source media (chosen by the *Media* menu item) to the destination media (chosen by the *To* menu item).

Press the **SELECT** button to initiate the copy function. If a file of the same name already exists on the destination media, it will be overwritten in the copy function. If the target item is active (e.g. the logo is being keyed), the copy function will fail.

3.7.5. Deleting a File

| MANAGE FILES |
| Delete |

This menu item is used to delete the file specified by the *File* menu item from the source media (chosen by the *Media* menu item)

Press the **SELECT** button to initiate the delete function. If the file is active (e.g. the logo is being keyed), the delete function will fail.

3.7.6. Erasing all the Files from a Media Disk

| MANAGE FILES |
| Format |

This menu item is used to delete all the files from the source media (chosen by the *Media* menu item)

Press the **SELECT** button to initiate the format function. If there are active files on the media (e.g. one or more of the logo files are being keyed), the format function will fail.

> **Warning, this function is not recommended but is provided as last resort. The FORMAT function will completely remove all Media items, logos etc from the device specified in the MEDIA sub-menu. There is no undo provided.**

3.8.   PRESET CONFIGURATION ITEMS

The *PRESET Setup* menu is used to configure the GPI and GPO functions. Table 3-3 shows the items available in the *PRESET Setup* menu. Section 3.8.1 and 3.8.2 provide detailed information about the sub-menus.

GPI Setup

Configures the actions triggered by the GPI inputs

GPO Setup

Configures the conditions that will trigger the GPO outputs

Table 3-3: Top Level of the Preset Setup Menu

3.8.1. Configuring the GPI Inputs

The 9625LG Series Keyer is fitted with 8 general purpose inputs (GPIs) that can be configured to trigger 2 different actions for a specific media item - *On Closure* and *On Open*. For example, the *On Closure* event can be used to fade in a logo to the program output. The *On Open* event for the same GPI can be used to fade out the same logo.

3.8.1.1.   Selecting One of the GPI Inputs to Configure

```
PRESET
   GPI Setup
      GPI:A
         GPI=A to H
```

This menu item is used to select one of the GPI inputs that will be configured using the other menu items in the *GPI SETUP* menu branch.

When you first enter this menu branch the selected GPI input will be shown. To change to configure another GPI input, press the **SELECT** button. The display will show `GPI=A` indicating that the GPI input can be changed. Use the ⬆ or ⬇ buttons to select the GPI input you wish to configure and press the **SELECT** button. You can configure the media file to be affected when the selected GPI input is closed and opened using the other menu items in the *GPI SETUP* menu branch.

3.8.1.2.   Configuring the GPI Actions

There is one menu item to configure what happens when the selected GPI closes (*CAction),* one menu item to configure what happens when the selected GPI opens (*OAction),* and one menu item to select a media item affected by the GPI (*Logo).* For the sake of simplicity only the *CAction* and *Logo* menu items will be shown in the manual. The *OAction* menu item operates the same as the *CAction*. The applicable GPI is shown on the left of the front panel display. Each GPI can be independently configured by first selecting the GPI using the *GPI* menu item described in section 3.8.1.1.

```
PRESET
  GPI Setup
    A CAction
      A CAction:Toggle
      A CAction:Duck I
      A CAction:Duck O
      A CAction:Duck
      A CAction:All Ou
      A CAction:Timer1
      A CAction:Timer2
      A CAction:None
      A CAction:Cue
      A CAction:In
      A CAction:Out
```

This menu item is used to select the action to occur when the GPI input is closed to ground.

Select *TOGGLE* to change the state of the media file selected by the Logo menu item. If the media file is not faded in, it will fade in or if the media file is faded in it will fade out. This function is useful if you want to use a momentary contact closure as opposed to a maintained contact closure to trigger a media file, but the disadvantage is that the current state of the media file is not guaranteed.

Select *Duck I* to begin a 'Duck Audio Insert'. This action is the same as pressing the **VOICE OVER** button when the LED above the button is not illuminated.

Select *Duck O* to end a 'Duck Audio Insert'. This action is the same as pressing the **VOICE OVER** button when the LED above the button is illuminated.

Select *DUCK* to toggle the state of the 'Duck Audio Insert'. If a 'Duck Audio Insert' is in effect it will be stopped or if a 'Duck Audio Insert' is not in effect it will be started. This function is useful if you want to use a momentary contact closure as opposed to a maintained contact closure to trigger a voice-over, but the disadvantage is that the current state of the voice-over is not guaranteed.

Select *All Out* to fade out all media files.

Select TIMER1 or TIMER2 to initiate a count up or count down function for a time logo.

Select *None* to not perform any action

Select *Cue* to load the media file selected by the *Logo* menu item into memory. The logo will be displayed only on the Preview output.

Select *In* to load the media file selected by the *Logo* menu item into memory and fade it in.

Select *Out* to fade out the media file selected by the *Logo* menu item.

```
PRESET
  GPI Setup
    A Logo:none
      None
      List of logos
```

This menu item is used to select a media file to be acted on if the *CAction* or *OAction* menu item is set to *Cue, In, Out* or *Toggle.*

Select *none* to disable any media file actions.

Use the ⬆ or ⬇ buttons to select from the list of available media files and press the **SELECT** button to make this the active media file for the *CAction* or *OAction* menu item.

3.8.2. Configuring the GPO Outputs

The 9625 Series Keyers are fitted with 4 contact closure general purpose outputs (GPOs) that can be used as tallies for various functions. Use the ⬆ or ⬇ pushbuttons to scroll through the list of available GPO's (A through D). The function of each GPO is displayed in brackets. To change the function of a GPO, press the **SELECT** pushbutton. The GPO's are active low and require a pull-up resistor to make them high when not active. See section 2.9 for information on connecting the GPO's. All the GPO's have the same functions available. The functions are described below.

```
PRESET
  GPO Setup
    GPO A - D
      None
      Power OK
      PSUs Okay
      PSU1 Okay
      PSU2 Okay
      Logo Stat
```

Select *None* to disable the GPO

Select *Power OK* to make the GPO low when either PSU1 or PSU2 are functioning.

Select *PSUs Okay* to make the GPO low when both PSU1 and PSU2 are functioning.

Select *PSU1 Okay* to make the GPO low when PSU1 is functioning.

Select *PSU2 Okay* to make the GPO low when PSU2 is functioning.

Select *Logo Stat* to make the GPO low when there is a logo being keyed on the Program buss.

3.9. EAS CONFIGURATION ITEMS (EAS OPTIONED UNITS ONLY)

When the EAS option is added to the 9625LG Series Keyer, it has the ability to key Emergency Alert messages received from a Sage or TFT EAS Decoder over the program video and to insert the emergency audio over the program audio. In order to insert the audio you will have to convert the analog audio from the decoder to AES and connect it to the voice over AES input as specified in the HTML Audio Setup page. See chapter 5 for more information on connecting and configuring the EAS decoder.

The *EAS Setup* menu is used to configure items related to the EAS option and is only available on units fitted with the option. Table 3-4 shows the items available in the *EAS Setup* menu. Sections 3.9.1 to 3.9.6 provide detailed information about each of the sub-menus.

Type	Selects how the EAS Crawl will transition onto the video
V	Sets the vertical position of the EAS crawl
Font	Sets the font used to display the EAS crawl
FontHei	Sets the font size used to display the EAS crawl
Rate	Sets the crawl rate of the EAS crawl
Warning BG	Sets the colour of the background for EAS warning messages
Warning FG	Sets the font colour for EAS warning messages
Watch BG	Sets the colour of the background for EAS watch messages
Watch FG	Sets the font colour for EAS watch messages
Test BG	Sets the colour of the background for EAS test messages
Test FG	Sets the font colour for EAS test messages

Table 3-4: Top Level of the EAS Setup Menu

3.9.1. Setting the EAS Display Type

EAS
Type
Ramp On
Ramp Off

This menu item is used to select how the EAS message will transition onto the video

Select *Ramp On* to have the crawl background appear as the text scrolls from right to left across the screen.

Select *Ramp Off* to have the crawl background appear all at once.

3.9.2. Setting the Vertical Position of EAS Crawl Display

```
EAS
  V
    V=20
    20 to 230
```

This menu item is used to set the vertical position of the EAS scrolling text message. The *V* value is the video line where the top of the scrolling message will be placed. The range for placement is from 20 to 230.

When you first enter this menu branch the selected current position will be shown. To change the vertical position, press the **SELECT** button. The display will show V=21 indicating that the line number can be changed. Use the ↑ or ↓ buttons to select the line number and press the **SELECT** button. The display will show V:xx indicating that this is the new the display position.

3.9.3. Setting the Font used for the EAS Crawl Display

```
EAS
  Font
    Font:fontname
```

This menu item is used to set the font that will be used for the EAS scrolling text message.

When you first enter this menu branch the current font name will be shown. To change the font to another true type font, press the **SELECT** button. The display will show font=fontname indicating that the font can be changed. Use the ↑ or ↓ buttons to select the from the available true type fonts that have been loaded using the Nomad™ or Overture™ software. When you press the **SELECT** button the display will show font:fontname indicating that this is the new display font.

3.9.4. Setting the Font Size for the EAS Crawl Display

```
EAS
  FontHei
    FontHei: 6
    5 to 100
```

This menu item is used to set the font size that will be used for the EAS scrolling text message.

The EAS height is the vertical size of the font measured in lines of video.

3.9.5. Setting the Crawl Rate for the EAS Crawl Display

```
EAS
  Rate
    Rate:6
    1 to 32
```

This menu item is used to set the speed with which the scrolling text moves from right to left across the screen measured in samples per field. (samples per frame for 720P video formats)

For example, it will take 120 fields for the text to scroll across a 720 pixel wide standard definition image with a scroll rate of 6. This default value of 6 should provide a comfortable rate, however, should you change the size of the font, you should also adjust the scrolling speed.

3.9.6. Setting the Colours for the EAS Crawl Display

There are three different levels of EAS messages – warning messages, watch messages and test messages. Each message typically has a different background and foreground colour associated with it so that the viewer will immediately know the severity of the EAS alert. There are six menu items used to set the foreground and background colours. For the sake of simplicity only the menu item for setting the warning background colour will be shown in the manual. The other menu items are used in the same way.

EAS
Warning BG
R:255G: 0 G: 0

This menu item is used to set the background colour for the warning messages. When you first enter this menu item you will be shown a set of colour values for each of the RGB colour components. The display will look similar to the following:

```
R:255 G:  0 G:  0
```

To change the colour value, press the **SELECT** button. The colon (:) after the R will change to an equals (=) sign indicating that you can change the R value. Use the ↑ or ↓ buttons to change the red colour component value. When you press the **SELECT** button the colon after the G will change to an equals sign indicating that you can change the G value. Proceed to set the G and B values in the same way. After changing the B value, press the **SELECT** button and the display will show something like:

```
R:255 G:128 G:128
```

This indicates that the warning background value has been changed.

3.10.   MEDIA CONFIGURATION ITEMS

The *MEDIA Setup* menu controls all the parameters for logos and audio clips. Table 3-5 shows the items available in the *MEDIA Setup* menu.   Sections 3.10.1 to 3.10.9 provide detailed information about each of the sub-menus. Some of the menu items apply to certain media types only.

To configure a specific media item exit the *Setup* menu and use the ⬆ or ⬇ buttons to select a particular media file. If you want to see the logo as you are positioning it then press the **SELECT, IN** or **CUE** key to fade the logo in. Then press the **SETUP** button to enter the *Setup* menu. Navigate to the *MEDIA* menu using the ⬆ or ⬇ buttons, then press the **SELECT** button to enter the *MEDIA* menu.

H	Sets the horizontal position of the selected logo
V	Sets the vertical position of the selected logo
Fade In	Sets the fade in duration for the selected logo
Hold	Sets how long the selected logo will be displayed
Fade Out	Sets the fade out duration for the selected logo
Gain	Sets the opacity (inverse of transparency) for the selected logo
Rate	Sets the crawl rate for the selected crawl logo
Repeat	Sets the repeat count for the selected crawl logo
Pause	Sets the pause time between repetitions of the selected crawl logo
Font	Sets the font used to display the text on the selected crawl logo
FontHei	Sets the font size used to display the text on the selected crawl logo
Bg Opacity	Sets the background opacity for the selected crawl logo
Fg Opacity	Sets the text opacity for the selected crawl logo
Crawl BG	Sets the colour of the background for the selected crawl logo
Crawl FG	Sets the font colour for the selected crawl logo
UD Timer	Selects the up/down timer to be used for a time logo
LN (Logo Name)	Selects the logo file to be used for a playlist
AN (Audio Name)	Selects the audio file to be used for a playlist

Table 3-5: Top Level of the Media Setup Menu

3.10.1. Setting the Logo Horizontal Position

```
MEDIA
  H
    H : 0
    0 to max pixels
```

This menu item is used to set the horizontal position for the current logo. The position is referenced to the left edge of the logo. The range of values depends on video standard in use.

Use the ↑ or ↓ buttons to adjust the position. The logo will move on the screen as you adjust its position.

3.10.2. Setting the Logo Vertical Position

```
MEDIA
  V
    V : 0
    0 to max lines
```

This menu item is used to set the vertical position for the current logo. The position is referenced to the top edge of the logo. The range of values depends on video standard in use.

Use the ↑ or ↓ buttons to adjust the position. The logo will move on the screen as you adjust its position.

3.10.3. Setting the Logo Transparency

```
MEDIA
  Gain
    Gain: 100%
```

This menu item is used to adjust the opacity (the inverse of transparency) of the logo as a percentage of the original opacity when the logo was created. When the *Logo Gain* is set at its default value of 100 the logo will be displayed at its original opacity.

For example, if the logo is created at 10% opaque, adjusting the *Gain* value to 200 will render the logo as 20% opaque. If the logo is created at 50% opaque, adjusting the *Gain* value to 200 will render the logo as 100% opaque. *Gain* values resulting in opacity levels above 100% are ignored.

Use the ↑ or ↓ buttons to adjust the *Gain* and then press the **SELECT** button to make the change.

3.10.4. Setting the Logo Fade In Duration

```
MEDIA
  Fade In
    Fade in:30
```

This menu item is used to set the fade in rate for the current logo. The range of values is 1 to 600 frames. The *Fade In* menu item only applies to static and crawl logos.

Use the ↑ or ↓ buttons to adjust the *Fade In* time and then press the **SELECT** button to make the change.

3.10.5. Setting the Logo Display Time

```
MEDIA
   Hold
      Hold: manual
          1 to 600
```

This menu item is used to set how long the current logo will be displayed. The range of values is 1 to 600 frames. The logo will automatically fade out after the *Hold* time has expired. Setting the value to *manual* will cause the logo to be displayed until it is manually faded out. The *Hold* menu item only applies to static and crawl logos.

Use the ⬆ or ⬇ buttons to adjust the *Hold* value and then press the **SELECT** button to make the change.

3.10.6. Setting the Logo Fade Out Duration

```
MEDIA
   Fade Out
      Fade out:30
```

This menu item is used to set the fade out rate for the current logo. The range of values is 1 to 600 frames. The *Fade out* menu item only applies to static and crawl logos.

Use the ⬆ or ⬇ buttons to adjust the *Fade Out* time and then press the **SELECT** button to make the change.

3.10.7. Crawl Logo Configuration Items (Crawl Optioned Units Only)

When the Crawl (CWL) option is added to the 9625LG Series Keyer, it has the ability to key scrolling text messages over the program video. In order to set up the crawl logo and enter the text for the crawl logo you will need to use the Nomad™ or Overture™ software. The crawl is rendered by Nomad™ or Overture™ into a logo (EVL) file and sent to the 9625LG Series Keyer. See the Nomad™ section of the Evertz Keyer Toolkit manual or refer to the Overture™ manual for more information on preparing crawl logos.

The *Media Setup* menu has several items that are used to configure crawl logos, and these items are only available when you select a crawl logo on units fitted with the crawl option. Sections 3.10.7.1 to 3.10.7.7 provide detailed information about each of the sub-menus.

3.10.7.1.   Setting the Crawl Logo Horizontal Crawl Rate

```
MEDIA
   Rate
      Rate:6
      1 to 15
```

This menu item is used to set the speed with which the scrolling text moves across the screen measured in samples per field. (samples per frame for 720p video formats)

For example, it will take 120 fields for the text to scroll across a 720 pixel wide standard definition image with a scroll rate of 6. This default value of 6 should provide a comfortable rate, however, should you change the size of the font, you should also adjust the scrolling speed.

3.10.7.2. Setting the Crawl Logo Repeat Count

```
MEDIA
  Repeat
    Repeat:0
    0 to 30
```

This menu item is used to set the number of times the text will scroll across the screen.

If you set the *Repeat* control to 0 the text will scroll continuously.

3.10.7.3. Setting The Crawl Logo Pause Time Between Repeats

```
MEDIA
  Pause
    Pause:0
    0 to 30
```

This menu item is used to set the length of time (in seconds) before a new crawl begins. The pause time is measured between the time that the text disappears on the left side of the screen until it appears back on the right side of the screen.

3.10.7.4. Setting the Crawl Logo Text Font

```
MEDIA
  Font
    Font:fontname
```

This menu item is used to set the font that will be used for the crawl logo scrolling text message.

When you first enter this menu branch the current font name will be shown. To change the font to another true type font, press the **SELECT** button. The display will show `font=fontname` indicating that the font can be changed. Use the ↑ or ↓ buttons to select the from the available true type fonts that have been loaded using the Nomad™ or Overture™ software. When you press the **SELECT** button the display will show `font:fontname` indicating that this is the new the display font.

3.10.7.5. Setting the Crawl Logo Text Font Size

```
MEDIA
  FontHei
    FontHei:30
```

This menu item is used to set the font size that will be used for the crawl logo scrolling text message.

The *FontHei* is the vertical size of the font measured in lines of video.

3.10.7.6. Setting the Crawl Logo Transparency

There are two menu items used to set the text (foreground) and background opacity (inverse of transparency) of the crawl logo. For the sake of simplicity only the menu item for setting the background opacity will be shown in the manual. The other menu item is used in the same way.

```
MEDIA
  Bg Opacity
    Bg Opacity:0-255
```

This menu item is used to set the background opacity (the inverse of transparency) for the crawl logo.

Setting the opacity to 255 makes the background completely opaque.

Setting the opacity to 0 makes the background completely transparent.

3.10.7.7.   Setting the Crawl Logo Colours

There are two menu items used to set the text (foreground) and background colours of the crawl logo. For the sake of simplicity only the menu item for setting the background colour will be shown in the manual. The other menu item is used in the same way.

```
MEDIA
  Crawl BG
    R:255 G:  0 B:  0
```

This menu item is used to set the background colour for the crawl logo. When you first enter this menu item you will be shown a set of colour values for each of the RGB colour components. The display will show something like:

```
        R:255 G:  0 B:  0
```

To change the colour value press the **SELECT** button. The colon (:) after the R will change to an equals (=) sign indicating that you can change the R value. Use the ⬆ or ⬇ buttons to change the red colour component value. When you press the **SELECT** button the colon after the G will change to an equals sign indicating that you can change the G value. Proceed to set the G and B values in the same way. After changing the B value, press the **SELECT** button and the display will show something like:

```
        R:255 G:128 B:128
```

indicating that the background colour value has been changed.

3.10.8.   Setting the Audio Clip Repeat Count (Media Keyer Units Only)

The 9625LGA and HD9625LGA Media Keyers, have the ability to insert audio clips into the program audio path. These clips can be played by themselves or associated with logos in a playlist. In order to set up a playlist will need to use the Nomad™ or Overture™ software. The playlist file (EKP) is sent by Nomad™ or Overture™ to the 9625LGA Series Media Keyer. See the Nomad™ section of the Evertz Keyer Toolkit manual or refer to the Overture™ manual for more information on preparing playlists.

```
MEDIA
  MEDIA
    CLRepeat:1
    0 to 100
```

This menu item is used to set the number of times the audio clip will play.

Setting the *CLRepeat* count to 0 will make the audio clip play out indefinitely until a fade out command is issued.

3.10.9. Playlist Configuration Items (Media Keyer Units Only)

The 9625LGA and HD9625LGA Media Keyers, have the ability to run playlists that insert logos and associated audio clips. In order to set up a playlist you will need to use the Nomad™ or Overture™ software. The playlist file (EKP) is sent by Nomad™ or Overture™ to the 9625LGA Series Media Keyer. See the Nomad™ section of the Evertz Keyer Toolkit manual or refer to the Overture™ manual for more information on preparing playlists.

The *MEDIA Setup* menu has two items that are used to view the logo and audio file that will be played when the playlist is faded in. These items are only available when you select a playlist from the front panel. Sections 3.10.9.1 and 3.10.9.2 provide detailed information about each of the sub-menus.

3.10.9.1. Showing the Logo Name for a Playlist

```
MEDIA
  Logo Name
    LN: none
    LN: Logo name
```

The *Logo Name* menu item is used to show the logo name for the playlist. In order to change the logo name for a playlist you will need to use the Nomad™ or Overture™ software.

3.10.9.2. Showing the Audio Clip Name for a Playlist

```
MEDIA
  Audio Name
    AN: none
    AN: Audio name
```

The *Audio Name* menu item is used to show the audio clip name for the playlist. In order to change the audio clip name for a playlist you will need to use the Nomad™ or Overture™ software.

3.11.   VOICE OVER TRANSITION CONFIGURATION ITEMS (MEDIA KEYER UNITS ONLY)

The Audio Over Transition feature is only available on 9625LGA Media Keyer units. The 9625LGA has the ability to mix audio from an external audio input (often referred to as voiceovers) over the normal program audio. For example, this feature could be used to provide information about upcoming programs while the credits from the previous program are being played. See the HTML audio section 3.13 for information on selecting the source of the voiceover audio as well as configuring the audio levels.

The *Audio Over Trans* setup menu is used to configure the fade in and fade out times for the voiceover audio. The following section provides detailed information about each of the sub-menu items:

```
Audio Over Trans
  VO In Rate
      VO In Rate: 30
      1 to 600
```

This menu item is used to set the voiceover fade in transition rate. The duration is measured in frames.

Use the ↑ or ↓ pushbuttons to change the *VO In Rate* value and press the **SELECT** button.

```
Audio Over Trans
  VO Out Rate
      VO Out Rate: 100
      1 to 600
```

This menu item is used to set the voiceover fade out transition rate. The duration is measured in frames.

Use the ↑ or ↓ pushbuttons to change the *VO Out Rate* value and press the **SELECT** button.

3.12. TEMPERATURE CONFIGURATION ITEMS

The 9625LG series has the ability to insert a logo that displays the current local temperature. The *Temperature* setup menu is used to configure parameters relating to these types of logos. The following section provides detailed information about each of the sub-menu items:

<table>
<tr><td>

Temperature
  Temp Source
    Source: Probe
    Source: Manual
    Source: METAR

</td><td>

This menu item is used to select the source of the temperature that will be displayed in temperature type logos.

Select *Probe* to take the temperature from the optional temperature probe. See section 2.10 for more information on using the temperature probe.

Select *Manual* to manually set the temperature via the *Set Temperature* menu item.

Select *METAR* to take the temperature from METAR data acquired via the Internet. See section 3.13.3 for more information on configuring the 9625LG to acquire METAR data.

</td></tr>
</table>

Temperature
  Temp Format
    Format: Fahrenhe
    Format: Celsius
	This menu item is used to set the format of the temperature as set by the *Set Temperature* menu item.
	
	Select *Fahrenhe* if the temperature entered is in degrees Fahrenheit.
	
	Select *Celsius* if the temperature entered is in degrees Celsius.
	
	Note: This menu item is only used when the *Temp Source* menu item is set to *Manual.* When you create a temperature logo, you select the format as well. If, for example, you have created a temperature logo that is formatted for Celsius and you manually set the temperature in degrees Fahrenheit, the 9625LG will automatically convert the value to degrees Celsius so that the correct value is displayed in the logo.

Temperature
  Set Temperature
    Degree: 20
    -600 to 600
	This menu item is used to set the temperature to be displayed in temperature type logos when the *Temp Source* menu item is set to *Manual.*
	
	Use the ↑ or ↓ pushbuttons to change the temperature value and press the **SELECT** button to set your desired temperature.

3.13. HTML Setup Page

As of firmware version 2.0, the audio setup for the 9625LGA Media Keyers is done via an HTML page. If the firmware version installed in your unit is less than 2.0 please upgrade to the latest version which is posted on the Evertz website. See section 6.2 for instruction on upgrading the firmware in your unit. The HTML page also allows you to configure the unit to acquire METAR data for use with temperature logos. You can access the HTML setup page by launching your Internet browser and entering the IP address of the 9625SW in the address bar. The following sections provide a description of the features available on the HTML setup page.

3.13.1. HTML Audio Setup Page (Media Keyers only)

When you access the Audio Setup page, a screen similar to the one below will be displayed:

9625LGA Audio Setup

Index ·Audio Setup ·Audio Shuffle Setup ·METAR Server Setup ·Reboot

Layer	Black		Input	
	Source	Gain (dB)	Source	Gain (dB)
1L	AES1L	0.0	AES1L	0.0
1R	AES1R	0.0	AES1R	0.0
2L	AES2L	0.0	AES2L	0.0
2R	AES2R	0.0	AES2R	0.0
3L	AES3L	0.0	AES3L	0.0
3R	AES3R	0.0	AES3R	0.0
4L	AES4L	0.0	AES4L	0.0
4R	AES4R	0.0	AES4R	0.0

Layer	Audioclip			Voiceover		
	Source	Gain (dB)	Duck (dB)	Source	Gain (dB)	Duck (dB)
1L	CLIP1L	0.0	0.0	AES8L	-6.0	-6.0
1R	CLIP1R	0.0	0.0	AES8R	-6.0	-6.0
2L	Silence	0.0	0.0	AES8L	-6.0	-6.0
2R	Silence	0.0	0.0	AES8R	-6.0	-6.0
3L	Silence	0.0	0.0	AES8L	-6.0	-6.0
3R	Silence	0.0	0.0	AES8R	-6.0	-6.0
4L	Silence	0.0	0.0	AES8L	-6.0	-6.0
4R	Silence	0.0	0.0	AES8R	-6.0	-6.0

Source	Non-PCM
AEMB1L	Yes ○ No ●
AEMB1R	Yes ○ No ●
AEMB2L	Yes ○ No ●
AEMB2R	Yes ○ No ●
AEMB3L	Yes ○ No ●
AEMB3R	Yes ○ No ●
AEMB4L	Yes ○ No ●
AEMB4R	Yes ○ No ●

Layer: This represents the output audio channel for both the AES outputs and the embedded audio out.

Black: This column is used to configure the audio, which is to be used when the 9625 Series Keyer is outputting black. The black function is only accessible via automation commands.

Input: This column is used to configure the audio, which is to be used when the 9625 Series Keyer is passing the video, which is connected to the INPUT BNC connector.

Audioclip: This column is used to configure which channel(s) the audio clip audio is to be inserted into. You can also specify the desired mix levels for audio clips here.

Voiceover: This column is used to configure the input source, which is to be used for voiceovers as well as the output channel(s), which the voiceover audio is to be inserted into. You can also specify the desired mix levels for voiceovers here.

Source: Specifies the input source for the output audio channel. The following is a description of each of the choices.

> AES1L - left channel of AES audio connected to PROG AES IN 1
> AES1R- right channel of AES audio connected to PROG AES IN 1
> AES2L - left channel of AES audio connected to PROG AES IN 2
> AES2R - right channel of AES audio connected to PROG AES IN 2
> AES3L - left channel of AES audio connected to PROG AES IN 3
> AES3R - right channel of AES audio connected to PROG AES IN 3
> AES4L - left channel of AES audio connected to PROG AES IN 4
> AES4R - right channel of AES audio connected to PROG AES IN 4
> AES5L - left channel of AES audio connected to ALT AES IN 1
> AES5R - right channel of AES audio connected to ALT AES IN 1
> AES6L - left channel of AES audio connected to ALT AES IN 2
> AES6R - right channel of AES audio connected to ALT AES IN 2
> AES7L - left channel of AES audio connected to ALT AES IN 3
> AES7R - right channel of AES audio connected to ALT AES IN 3
> AES8L - left channel of AES audio connected to ALT AES IN 4
> AES8R - right channel of AES audio connected to ALT AES IN 4
> AEMB1L - group 1 channel 1 of embedded audio on the input video
> AEMB1R - group 1 channel 2 of embedded audio on the input video
> AEMB2L - group 1 channel 3 of embedded audio on the input video
> AEMB2R - group 1 channel 4 of embedded audio on the input video
> AEMB3L - group 2 channel 1 of embedded audio on the input video
> AEMB3R - group 2 channel 2 of embedded audio on the input video
> AEMB4L - group 2 channel 3 of embedded audio on the input video
> AEMB4R - group 2 channel 4 of embedded audio on the input video
> AES1M - mono mix of AES audio connected to PROG AES IN 1
> AES2M - mono mix of AES audio connected to PROG AES IN 2
> AES3M - mono mix of AES audio connected to PROG AES IN 3
> AES4M - mono mix of AES audio connected to PROG AES IN 4
> AES5M - mono mix of AES audio connected to ALT AES IN 1
> AES6M - mono mix of AES audio connected to ALT AES IN 2
> AES7M - mono mix of AES audio connected to ALT AES IN 3
> AES8M - mono mix of AES audio connected to ALT AES IN 4

AEMB1M - mono mix of group 1 channels 1 + 2 of embedded audio on the input video
AEMB2M - mono mix of group 1 channels 3 + 4 of embedded audio on the input video
AEMB3M - mono mix of group 2 channels 1 + 2 of embedded audio on the input video
AEMB4M - mono mix of group 2 channels 3 + 4 of embedded audio on the input video
silence - the output audio channel will contain silence

Gain: Sets the output gain for the audio channel in question. To pass the audio through at the received level, set the gain to 0. To boost the audio level set the gain to a positive value. To reduce the audio level set the gain to a negative value.

Duck: Sets the gain for the program audio when an audio mix is in effect. To pass the background audio through at the received level, set the duck to 0. To boost the background audio level set the duck to a positive value. To reduce the background audio level set the duck to a negative value.

Non-PCM: Selects whether the embedded audio is PCM. If the audio is PCM set Non-PCM to No. If the audio is not PCM, such as Dolby-E, set Non-PCM to Yes.

3.13.2. HTML Audio Shuffle Page

This feature has been implemented specifically for Harris automation systems, which have the ability to do audio shuffling. The audio channels are called by number (0 through 15). This menu allows you to assign an audio channel to each number.

3.13.3. METAR Setup Page

METAR is widely used in the aviation industry to obtain meteorological data from airports. The 9625 Series Keyers can extract the temperature from the data and use it for temperature logos. Use of this feature requires a connection to the Internet. When you access the METAR setup page you will see something like the following.

9625LGA METAR Setup

Index ·Audio Setup ·Audio Shuffle Setup ·METAR Server Setup ·Reboot

METAR Server IP	140	90	128	71
Airport ID	KBUR			
Poll Interval(minutes)	10			
Poll Interval at Failure	10			

Submit   Update   Revert

METAR Server IP: Enter the IP address of the METAR server you would like to use. A known IP address for one METAR server is 140.90.128.71.

Airport ID: Enter the airport code for the airport you would like to obtain the temperature from. The *Airport ID* must be entered in all upper case letters.

Poll Interval: Enter how often you would like the 9625SW to obtain the temperature. Temperature logos will be immediately updated each time the temperature is retrieved from the METAR server.

Poll Interval at Failure: Enter how long you would like the 9625SW to wait before trying to retrieve the temperature from the METAR server after a failed attempt.

3.14.   GPI Scripting

GPI script files are text-based files that can be programmed and sent to your unit by Nomad™ or Overture™. The syntax is important as the script represents programming code that will be executed when the allocated GPI trigger event occurs. There are 8 GPI inputs. Each input has 2 events: close and open. You can program scripts for each of these 16 events. If a script file is present on the flash file system the unit will process the script when the event is triggered. If the script file is not present when a GPI event is triggered, then the internal GPI menu settings will be used.

The GPI script files are text files, so you can edit them with notepad very easily. The title of a script is used by the system to figure out which GPI event this file is applicable to.
Ex. gpi-h-close, gpi-a-open

In this case, *gpi* states that the script will be running off the state of a GPI trigger. The *h* represents which specific GPI trigger the script will react to. GPI triggers range from A to H. *Close* shows that the script will run when the GPI is in a closed state.

In the programming language the script utilizes, a comment is represented by the symbol **#**. Any text that follows this symbol on a line of code will not execute a command or conduct any sort of action.

Ex. # this file describes the complete state of the keyer

CMD represents a command that is meant to be executed by the script when it runs.

Ex. cmd load_preset(1)

There are many different kinds of commands that can be run, and each command will perform a specific action when the script is run.

• cmd load_preset(1) : This command will load preset 1 (not implemented)
• cmd udt_start(1) : This command will start up/down timer #1
• cmd media_all_out() :This command fades out all logos and audio clips
• cmd media_cue("02.evl"): This command will cue up logo "02.evl"
• cmd media_in("03.evl") : This command will fade in logo "03.evl"
• cmd media_out("04.evl"): This command will fade out logo "04.evl"
• cmd media_toggle("05.evl"): This command will toggle the state of logo "05.evl", if the logo is faded out it will be faded in, if it is faded in then it will be faded out.
• cmd udt_stop(2): This command will stop up/down timer #2
• cmd udt_toggle(1): This command will toggle the start/stop state of the up/down timer #1, if the timer is started it will stop, if stopped it will start
• cmd udt_reload(2): This command will reset up/down timer #2 to the timer start time
• cmd voiceover_enable():This command will enable the voiceover function
• cmd voiceover_disable():This command will disable the voiceover function
• cmd voiceover_toggle():This command will toggle the state of the voiceover function, if the state is enabled it will be disabled, if disabled it will be enabled
• cmd transition("video"): This command will enable a video transition setting the preview bus to the program bus using the transition settings specified either in the cript or from the panel
• cmd transition("audio"): This command will enable an audio transition from the device.
• cmd transition("key,audio"): This command will enable the DSK layer and enable an audio transition from the device.
• cmd transition("bg,audio"): This command will transition the background video and audio

The script can also direct the actions of channels coming from the device.
object bus_setup ("1") {
object channel ("1L") {
source = "AES1L" gain = 0 router = "1" }
}
In this case, the script is telling the channel "1L" of input 1 that both it's sources will come from the discrete input 1L of ABO 1 side A and the gain on will be 0.

Transition options are as follows
• "Cut", mode_cut
• "Fade", mode_fade

- "BarWipeTopToBottom", mode_wipe_0
- "DiagonalWipeTopLeft", mode_wipe_45
- "BarWipeLeftToRight", mode_wipe_90
- "DiagonalWipeBottomLeft", mode_wipe_135
- "BarWipeBottomToTop", mode_wipe_180
- "DiagonalWipeBottomRight", mode_wipe_225
- "BarWipeRightToLeft", mode_wipe_270
- "DiagonalWipeTopRight", mode_wipe_315
- "BoxWipeBottomLeft", mode_wipe_blbox
- "BoxWipeBottomRight", mode_wipe_brbox
- "BoxWipeTopLeft", mode_wipe_tlbox
- "BoxWipeTopRight", mode_wipe_trbox
- "BarnDoorWipeVerticalClose", mode_wipe_lrcurt
- "BarnDoorWipeHorizontalClose", mode_wipe_tbcurt
- "BarnDoorWipeVerticalOpen", mode_wipe_lrsplit
- "BarnDoorWipeHorizontalOpen", mode_wipe_tbsplit
- "IrisWipeRectangleClose", mode_wipe_box_in
- "IrisWipeRectangleOpen", mode_wipe_box_out
- "IrisWipeCircleClose", mode_wipe_circle_in
- "IrisWipeCircleOpen", mode_wipe_circle_out
- "IrisWipeDiamondClose", mode_wipe_diamond_in
- "IrisWipeDiamondOpen", mode_wipe_diamond_out
- "CutFade", mode_cut_fade
- "FadeFade", mode_fade_fade
- "FadeCut", mode_fade_cut

Audio channel setups are handled as an object configuration
object bus_setup ("1") {
object channel ("1L") {
source = "AES1L" gain = 0 router = "1" }
object channel ("2R") {
source = "Silence" gain = 0 router = "none" }
object channel ("4L") {
source = "AES4L" gain = 0 router = "12"}
}
The values for the router property are "1", "2", ..., "12", "none". One router property is needed for each channel pair (the latter one overwrites the first if different router values are specified for both left and right channels).

This example sets the output audio channel 1L to the AES discrete input 1L, which is the first channel of the first AES BNC in the program BNC block on the rear of the unit. This input will be active whenever you select the Bkg/A from the front panel, gpi or automation. This will also be the source for the background audio when the unit is in DSK mode.

Scripting Object Syntax

object TYPE (name) {
object TYPE (name)
PROPERTY = value

command
}
Note: obj can be used in place of object

Defined TYPE
bus_setup
channel
router
transition
matte
key
audio
source
misc

Defined PROPERTY
pgm_source
pvw_source
key_source
fill_source
type
swap
rate
enable
top
bottom
source
router
mode
offset
threshold
gain
nonpcm
line21_protect
b_blanking

Individual object constructs

object bus_setup ("bus names")
{
object channel ("channel names")
{
source = "audio_source_name"
gain = "gain_db"
router = "1", …, "12", "none"
nonpcm = "1" or "0"
}
}
Note: source, gain, and router don't have to be specified all in one object

Left and right channels are routed in pairs. As a result, latter router definition for a pair overrides the earlier one if there's any.
nonpcm is not implemented in current version

bus names
"black"
"white"
"1", "2", "3", "4", "5", "6", "7", "8", "9", "10", "11", "12"

channel names
"1L", "1R", "2L", "2R", "3L", "3R", "4L", "4R"

audio_source_names
AES1L, AES1R, AES2L, AES2R,
AES3L, AES3R, AES4L, AES4R,
AES1M, AES2M, AES3M, AES4M,
EMB1L, EMB1R, EMB2L, EMB2R,
EMB3L, EMB3R, EMB4L, EMB4R,
EMB1M, EMB2M, EMB3M, EMB4M
Silence

object router()
{
pgm_source = "bus_name"
pvw_source = "bus_name"
key_source = "bus_name"
fill_source = "bus_name"
}

Note:
values for bus_name are the same as for object bus_setup.
key_source and fill_source are not implemented in current version
object transition()
{
type = "transition type"
rate = "integer number of fields"
swap = "1" or "0"
}
Note: "1" to enable swap
transition type
Cut, Fade,
BarWipeTopToBottom, DiagonalWipeTopLeft,
BarWipeLeftToRight, DiagonalWipeBottomLeft,
BarWipeBottomToTop, DiagonalWipeBottomRight,
BarWipeRightToLeft, DiagonalWipeTopRight,
BoxWipeBottomLeft, BoxWipeBottomRight,
BarnDoorWipeVerticalClose, BarnDoorWipeHorizontalClose,
BarnDoorWipeVerticalOpen, BarnDoorWipeHorizontalOpen,
IrisWipeRectangleClose, IrisWipeRectangleOpen,
IrisWipeCircleClose, IrisWipeCircleOpen,

IrisWipeDiamondClose, IrisWipeDiamondOpen,
CutFade, FadeFade, FadeCut

object matte()
{
enable = "1" or "0"
top = "integer number of lines"
bottom = "integer number of lines"
}
Note: "1" to enable matte

object key ()
{
mode = "input" or "self"
offset = "integer offset"
threshold = "integer threshold"
}

object misc ()
{
line21_protect = "1" or "0"
b_blanking = "1" or "0"
}
Note: "1" to enable line 21 protect or b_blanking.

Scenario Samples
SAP Programming

This means audio must always be present on channel audio channel 3 (group 1 Pair 2 channel 1)

Default operation is mono mix of 1 & 2 on 3
GPI scripts are used to configure the audio from automation control
GPI_A_Close Pass 3 to 3 – file name: gpi-a-close
# Source Bus A Config
object bus_setup ("a") {
object channel ("2L") {
source = "AES2L" gain = 0 }
}
GPI_A_Open Revert to Mono Mix of 1 & 2 on 3 – file name: gpi-a-open
# Source Bus A Config
object bus_setup ("a") {
object channel ("2L") {
source = "AES1M" gain = 0 }
}
GPI_B_Close Remap channel 4 to channel 3 – file name: gpi-b-close
# Source Bus A Config
object bus_setup ("a") {
object channel ("2L") {
source = "AES2R" gain = 0 }

```
}
GPI_B_Open Revert to Mono Mix of 1 & 2 on 3 – file name: gpi-b-open
# Source Bus A Config
object bus_setup ("a") {
object channel ("2L") {
source = "AES1M" gain = 0 }
}
```

Bring Up a Trouble Slide Called "trouble"

These 2 GPI scripts will fade out all displayed logos and stop all audio clips as well as invoke a full screen logo called "trouble" or a trouble slide. The slide must first be prepared in InstaLogo™ or Overture™ and uploaded to the unit.

```
GPI_H_Close – file name: gpi-h-close
# Logo commands
cmd media_all_out()
cmd media_in("trouble")
GPI_H_Open – file name: gpi-h-open
# Logo commands
cmd media_all_out()
```

The Logo Layer must be enabled for logos and audio clips to playout on the desired output bus of DSK-LGA and SW units. If you want to preview an audio clip, make sure the logo layer for the preview bus is enabled and disable the logo layer on the program bus for the DSK-LGA and SW units. Use Cue in the LGA units, however, there is a known bug in that cued audio clips playout on the program output.

EAS for Audio Voice Over

These 2 GPI scripts will enable and disable the voiceover function mixing the output audio with the configurations set on the HTML voiceover settings.
```
GPI_H_Close – file name: gpi-h-close
# Voiceover Commands
cmd voiceover_enable()
GPI_H_Open – file name: gpi-h-open
# Voiceover Commands
cmd voiceover_disable()
```

When the voice over is disengaged, the audio that was active will still be active as the background source selections are not affected.

EAS for Audio Voice Over Using 1 Other Voiceover

These 2 GPI scripts will enable and disable the voiceover function mixing the output audio with the configurations set from the source selections in the file and then reset the voiceover to the standard inputs. GPI H remaps and invokes the voiceover. GPI H is connected to the tally out from the EAS decoder, while GPI G will be used for normal voiceovers.

Warning, GPI G Open could disable the voice over function while the EAS voiceover is active.

GPI_G_Close – file name: gpi-g-close

Voiceover Commands
cmd voiceover_disable()
insert appropriate VO audio source selection code here
cmd voiceover_enable()
GPI_G_Open – file name: gpi-g-open
Voiceover Commands
cmd voiceover_disable()
insert appropriate VO audio source selection code here
GPI_H_Close – file name: gpi-h-close
cmd voiceover_disable()
insert appropriate VO audio source selection code here
cmd voiceover_enable()
GPI_H_Open – file name: gpi-h-open
cmd voiceover_disable()
insert appropriate VO audio source selection code here

When the voiceover is disengaged, the audio that was active will still be active as the background source selections are not affected, however the voiceovers will be off.

This page left intentionally blank

CHAPTER 4
TABLE OF CONTENTS

Figures

This page left intentionally blank

4.   HOW TO OPERATE THE KEYER USING THE DESKTOP CONTROL PANEL

The 9625LG Series Keyers are available as a 1RU chassis with a separate desktop remote control panel. This chapter describes the operation of the 9625LG Series Keyer using the desktop remote control panel. For information about connecting the desktop remote control panel to the 9625LG Series Keyer electronics see section 2.4.
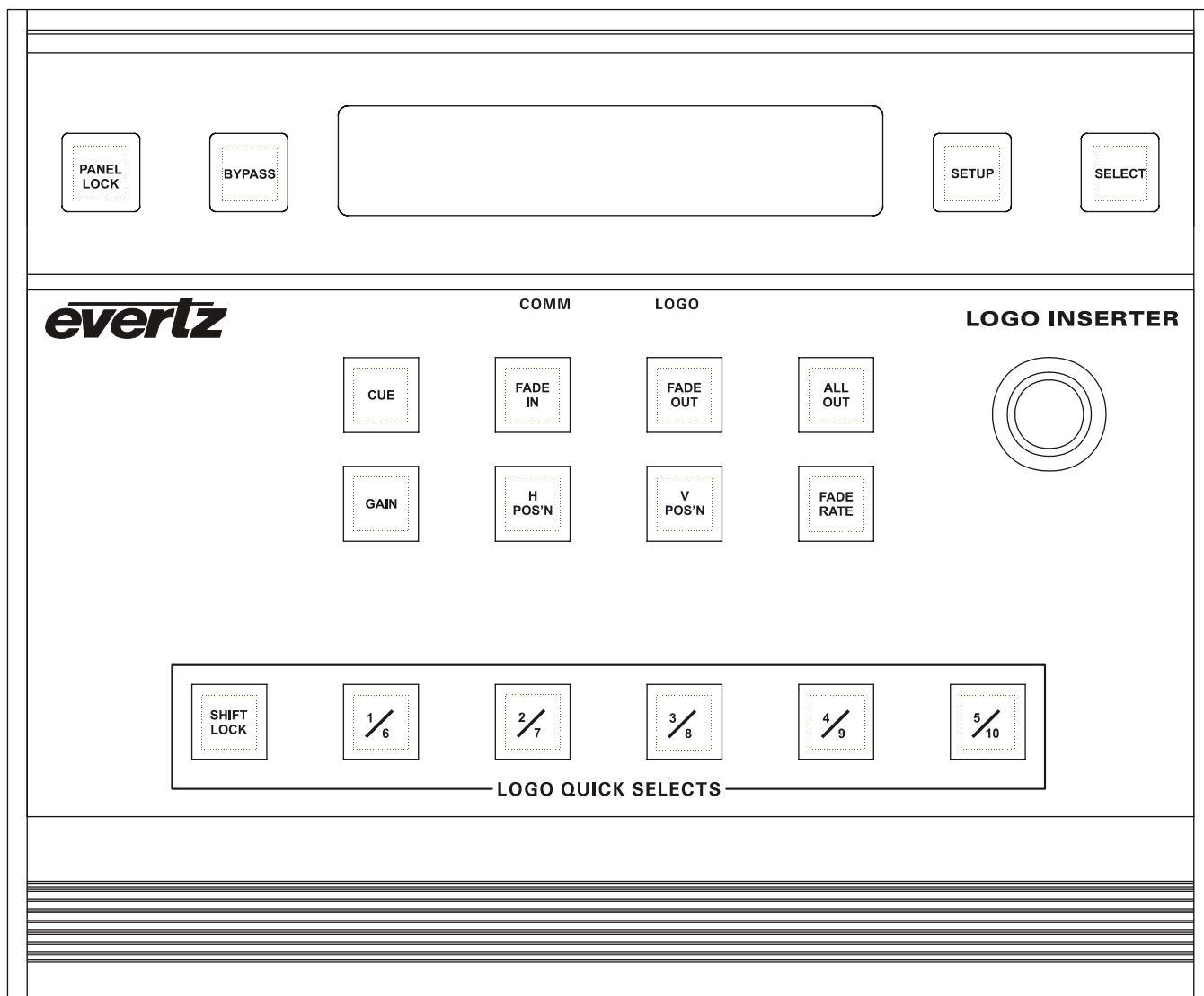
Figure 4-1: Logo Inserter Desktop Control Panel Layout
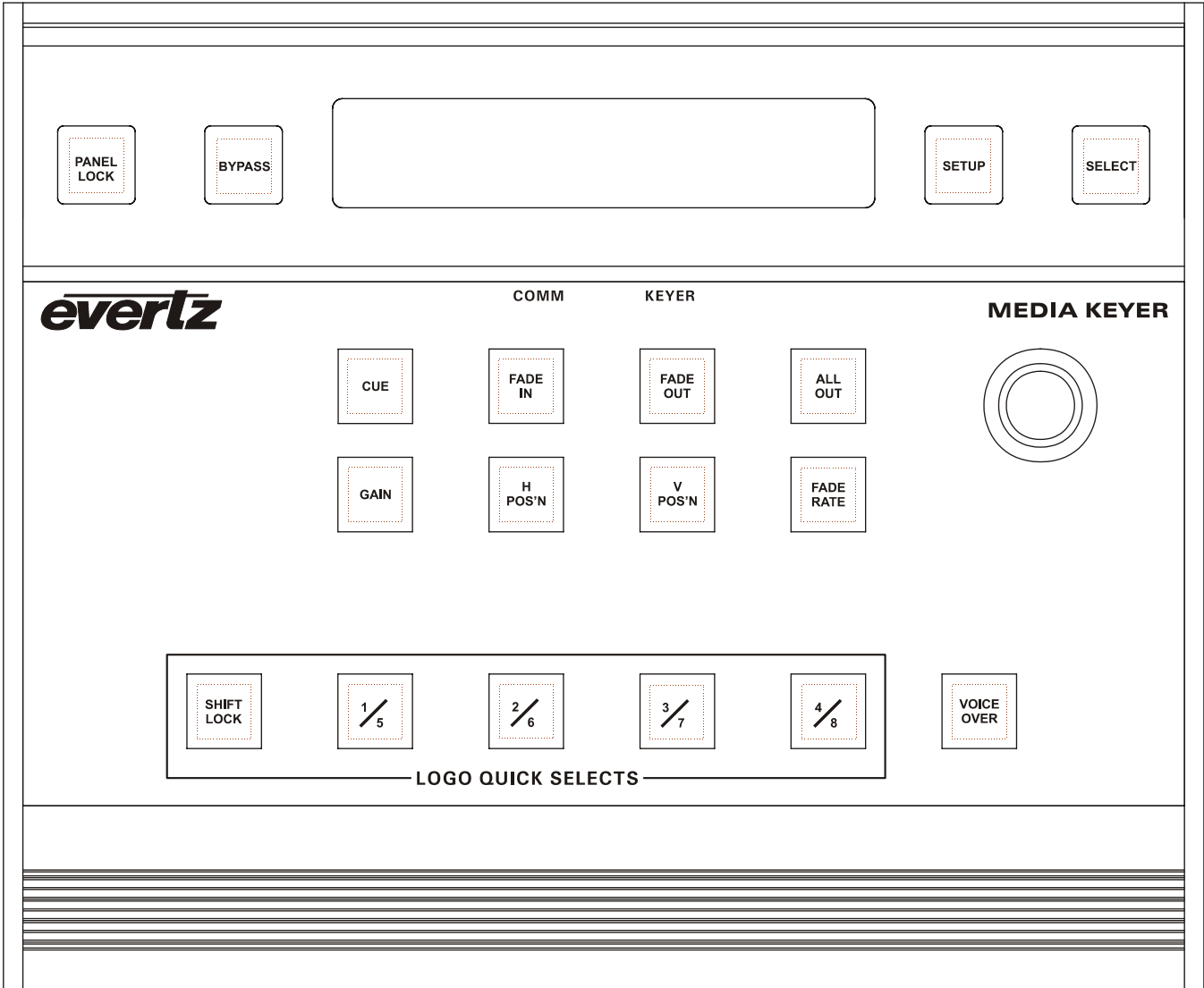
Figure 4-2: Media Keyer Desktop Control Panel Layout

4.1.   AN OVERVIEW OF KEY AND DISPLAY FUNCTIONS

The Desktop panel controls consist of a shaft encoder knob, a 16 digit alphanumeric display, and 18 illuminated buttons. The illuminated buttons will light up to indicate that their controlled function is active.

The buttons are used to provide control of the 9625LG Series Keyer unit, and to navigate the front panel *Setup* menu system. The Front panel *Setup* Menu system is a quick and simple method of configuring the Keyer for your application. See sections 3.3 to 3.10 for information on configuring the unit using the *Setup* menu system.

4.1.1. Fade Button Group

CUE　　This button is used to load a media item into the media keyer memory making it immediately available for fade in. If the media item is not currently loaded into memory, a progress indicator will appear to the right of the logo name while it is loading into memory. Cueing a media item allows it to be viewed on the preview output buss before it is faded in. If the LED is illuminated, the media item has been cued.

　　　　Cued animations are loaded into memory and paused on the first frame of the animation until the Fade In command is received. Cued logos may be moved horizontally and vertically on the preview output. Gain level setting changes are visible on the preview output channels; therefore all Cued logos are keyed at 100%. Cued logos will repeat their fade in, hold and fade out sequence over and over again on the preview output. On Media Keyer units, audio clips will play over and over again. If you cue a playlist item on a Media Keyer, the logo and its associated audio clip will both be cued. This allows you to preview the entire logo and audio clip quickly and easily before placing it on air.

IN　　　This button is used to *fade in* the currently selected media item onto the Program output channels. Logos are keyed on the program output at their Gain level settings. If the media item has not been previously cued, it must be loaded into memory before it can be faded in. This process may take a few seconds while the item is being cued. If the media item is not currently loaded into memory, a progress indicator will appear to the right of the logo name while it is loading into memory. If you fade in a playlist item on a Media Keyer, the logo and its associated audio clip will both be faded in. If the LED is illuminated, the media item has been faded in. The media item name will flash on the front panel display indicating that it is *faded in.*

OUT　　This button is used to *fade out* the currently selected media item from the Program output channels. If you fade out a playlist item on a Media Keyer, the logo and its associated audio clip will both be faded out. If the LED is illuminated, the media item has been faded out. The media item name will stop flashing on the front panel display indicating that it is *faded out.*

ALL OUT　　This button is used to *fade out* all media items from the Program output channels. If the LED is illuminated, all media items have been faded out.

SELECT　When you are not in the *Setup Menu*, this button controls whether the selected media item shown on the front panel display is present on the Program output buss. Scroll to the logo required using the **SHAFT ENCODER** ⬆ & ⬇ buttons. If the media item is currently faded in its name will flash in the front panel display and the IN LED will be ON. To fade the media item in, press the **SELECT** button. The media item will fade in according to its programmed fade in time and the media item name display will begin flashing. If the media item is not currently loaded into the memory, a progress indicator will appear to the right of the logo name while it is loading into memory. To remove a media item from the output video busses, press the **SELECT** button when the media item name is flashing. The media item will fade out according to its programmed fade out time and its name display will stop flashing.

4.1.2. The Quick Select Button Group

QUICK SELECT   These buttons are used as a quick method to *fade in* and *out* frequently used media items. On the Logo Inserters you can access up to 10 logos using the quick select keys. On the Media Keyers you can access up to 8 media items. Each button can access two different media items depending on the state of the **SHIFT LOCK** LED. When the **SHIFT LOCK** LED is Off the **QUICK SELECT** buttons access the lower numbered *Quick Select.* When the **SHIFT LOCK** LED is On, the **QUICK SELECT** buttons access the high numbered *Quick Select* items.

Pressing the **QUICK SELECT** button once fades the assigned media item in. Pressing the **QUICK SELECT** button once again fades the assigned media item out. When a *Quick Select* is active the button will be illuminated. To assign a media item to a *Quick Select*, scroll to the media item in the display window using the **SHAFT ENCODER**. Then press and hold the desired **QUICK SELECT** button for 3 seconds. Remember to press the **SHIFT LOCK** button first to access the higher numbered *Quick Selects.* Release the button and the item is assigned to the button.

SHIFT LOCK To access the second bank of *Quick Selects* press the **SHIFT LOCK** button. The **SHIFT LOCK** button LED will be illuminated to indicate that *Shift Lock* is on and that the higher numbered *Quick Selects* are available. To turn *Shift Lock* off press the **SHIFT LOCK** button once again. The **SHIFT LOCK** button LED will be extinguished to indicate that *Shift Lock* is off and that the lower numbered *Quick Selects* are available.

4.1.3. The Function Button Group

PANEL LOCK   This button will lock the front panel controls so that changes cannot be made. The **PANEL LOCK** button LED will be illuminated indicating that the control panel buttons are disabled. When any of these buttons are pressed, the front panel display will show the message `Panel Locked` for a few seconds. Pressing the **PANEL LOCK** button again will return the control panel keys to their normal functions and the **PANEL LOCK** button LED will be extinguished indicating that the front panel controls are active.

> ⚠ **The 9625LG Series Keyers may still be controlled from the GPI inputs or the automation when the front panel is Locked.**

VOICE OVER This button (only available on the Media Keyer units) will mix the Voice Over audio with the background (program) audio. The *HTML Audio Setup page* is used to configure which inputs will be treated as background audio and which inputs are treated as Voice Over Audio. (See section 3.13.1)

BYPASS This button controls the bypass relays (optional on high definition units). The **BYPASS** button LED will be illuminated to indicate that the unit is in manual *Bypass* mode. When the unit is in *Bypass* mode, the program input video is directly connected to the FILL video output. On the Media Keyers, the AES PROG inputs are directly connected to the AES PROG outputs. The other outputs will not have any signals on them. The unit will revert to *Bypass* mode in the event of a power loss.

4.1.4. Shaft Encoder Knob

SHAFT ENCODER   When the 9625LG Series Keyer is in one of the *Setup* menus, the **SHAFT ENCODER** knob is used to move to various items in the menu system or change a menu item's parameter value. (Also, see section 3.2)

When the 9625LG Series Keyer is not in one of the *Setup* menus, the **SHAFT ENCODER** knob is used to select logos and audio clips that are stored in the file system. When the desired logo or audio clip is shown on the display, press the **SELECT** button to fade in the logo or play the audio clip.

4.1.5. Setup Button Group

SETUP   This button is used to enter the *Setup* menu, which is used to configure the operating modes of the keyer. (See section 3.3 for an overview of the *Setup* menu.) When you are in the *Setup* menu, this button is also used to back out of menu selections to the next higher menu level or to exit the *Setup* menu and return to normal panel operation.

SELECT   When in the *Setup* menu, this button is used to choose a submenu and navigate to the next level down in the menu structure. When you are at the bottom level of the menu system it is also used to accept numeric values or to make the displayed menu choice the active value for that menu item.

When you are not in the *Setup* menu, this button is also used to fade logos in and out on the selected output buss.

4.1.6. Control Panel Status Indicators

The illuminated buttons show operational status of the 9625LG Series Keyer at a glance. When they are On they indicate that the function associated with the button is active.

LOGO, KEYER   This LED (labelled LOGO on Logo Inserters and KEYER on Media Keyers) indicates that at least one media item is faded in and available on the Program output buss.

COMM   This LED is used to signal two types of communication to the 9625LG Series Keyer. When it is flashing On approximately every 1.5 seconds, it is indicating that the control panel is communicating with the main microprocessor in the unit. When the 9625LG Series Keyer is under automation control, or logos or other media files are being transferred to or from the unit using the Nomad™ or Overture™ software, the LED will be on when the unit is receiving data from the control source.

If it is Off continuously, that means that the control panel has lost communications with the main unit. In that case check the cabling if you are using a remote control panel. Otherwise the unit may require a reboot if the buttons on the control panel are not responding.

4.2. OVERVIEW OF DESKTOP CONTROL PANEL OPERATION

4.2.1. Displaying Logos

Scroll to the media item required using the **SHAFT ENCODER**. If the media item is currently faded in its name will flash in the front panel display. To load a media item into memory and display it on the preview buss, press the **CUE** button. To fade in a media item on the program buss, press the **SELECT** or **FADE IN** button. The media item will fade in according to its programmed fade in time and the media item name display will begin flashing. If the media item is not currently loaded into memory, a progress indicator will appear to the right of the media item name while it is loading into memory. To fade out a media item from the output buss, press the **SELECT** or **FADE OUT** button when the logo name is flashing. The logo will fade out according to its programmed fade out time and the logo name display will stop flashing. To remove all media items from the output video buss, press the **ALL OUT** button.

4.3. AN OVERVIEW OF THE SETUP MENU SYSTEM

The *SETUP* menu system uses the 16 digit alphanumeric display and provides a quick, intuitive method of configuring the 9625LG Series Keyer. These items are often only required to be set up at installation time, and do not pertain to the day-to-day operation of the unit. Figure 3-5 provides an overview of the *Setup* menu system.

4.3.1. Navigating The Setup Menu

To enter the *Setup* menu, press the **SETUP** button. This will bring you to the main *Setup* menu where you can use the **SHAFT ENCODER** to move up and down the list of available sub-menus. Top level menu items are shown in UPPERCASE. Once you have chosen the desired sub-menu, press the **SELECT** button to select the next menu level.

Once in a sub-menu, there may be another menu layer (shown in Title Case), or there may be a list of parameters to adjust (shown in lower case). If there is another set of menu choices, use the **SHAFT ENCODER** to select the desired menu item and press the **SELECT** button. Continue this process until you get to the bottom of the menu tree where the list of parameters to be adjusted is shown.

To adjust any parameter, use the **SHAFT ENCODER** to move up or down the parameter list to the desired parameter. To view the possible values for that item, press the **SELECT** button. The current value for that parameter will be shown with an asterisk (*). Turning one of the **SHAFT ENCODERS** allows you to show the possible values for the selected parameter. The various parameter values that are not currently selected will NOT have an asterisk (*). When you have stopped at the desired value, press the **SELECT** button to save your selection. The value will be shown with an asterisk (*) indicating that it is now the current value. To move up one level in the menu, press the **SETUP** button.

You can select other parameters from that sub-menu by using the **SHAFT ENCODER**, followed by the **SELECT** button. Alternately you can move up one menu item by pressing the **SETUP** button.

When you have made all the desired changes, press the **SETUP** button one or more times until you return to the top of the Menu tree and exit the *Setup* menu.

Each of the menu items, with function explanations, are described in sections 3.5 to 3.10.

CHAPTER 5
TABLE OF CONTENTS

This page left intentionally blank

5. OPTIONAL EAS DECODER INTERFACE (EAS OPTIONED UNITS ONLY)

The 9625LG Series Keyer with the EAS option fitted is the perfect solution for on-air insertion of channel branding bugs and Emergency Alert System messages. The 9625LG Series Keyer is designed to receive Emergency Alert System message data and audio from a Sage or TFT EAS decoder unit and insert it over the program video and audio. This chapter describes how to connect your unit to your EAS decoder, configure the 9625LG Series Keyer and EAS decoder, and perform tests to verify the unit is functioning properly.

5.1. CONNECTING THE 9625LG SERIES KEYER TO THE EAS DECODER

Make sure that the basic video and audio connections are wired as recommended in sections 2.5 and 2.6. You will also have to route the output program video to an appropriate monitor to view the on-screen scrolling messages generated by the 9625LG Series Keyer's built in character generator. Please ensure that your 9625LG Series Keyer is out of the broadcast path when testing functionality. Figure 5-1 provides a simplified connection overview.
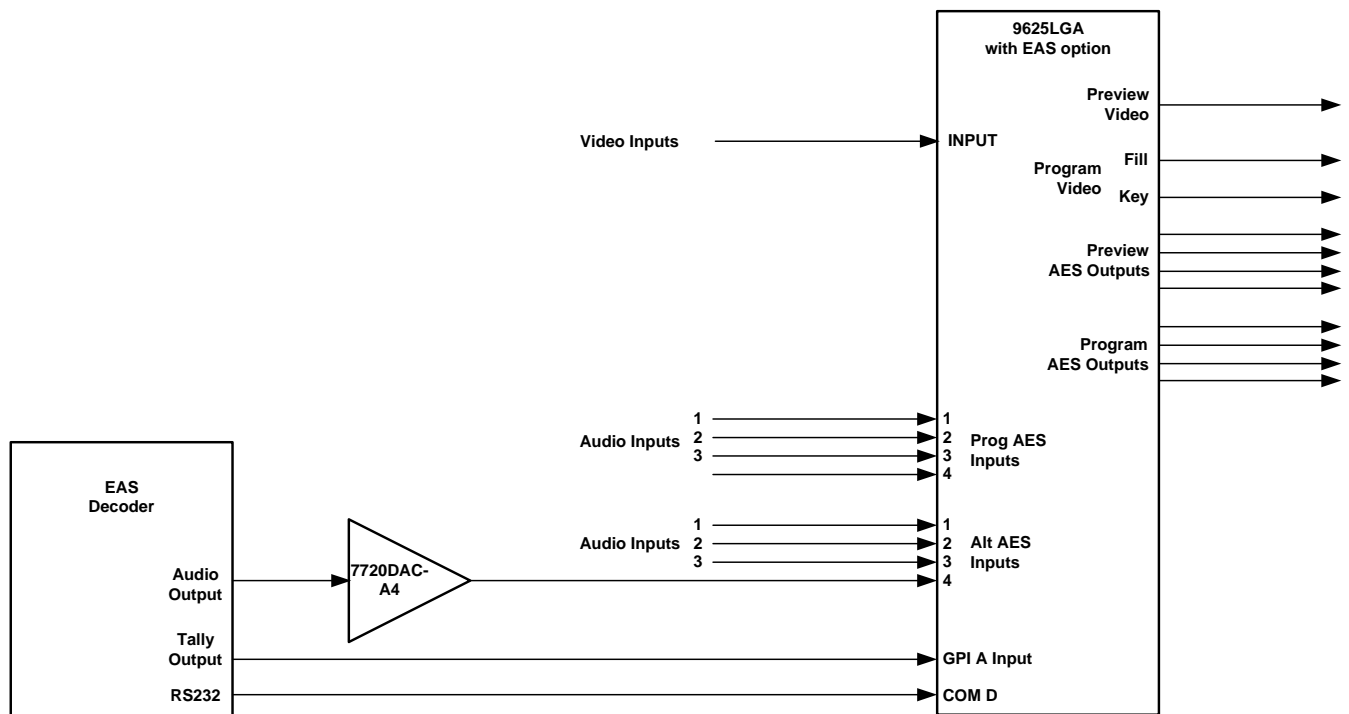
Figure 5-1: EAS Decoder Connection

5.1.1. Connecting The Serial Port

Connect a straight-through RS232 cable (shipped with unit) to either the Serial Control C or COM D serial ports on the keyer unit. The other end of the cable will connect to the EAS decoder. (See the section specific to your encoder manufacturer) You can also connect the EAS decoder to the keyer's virtual serial port (COM E) by using a serial to Ethernet adapter as described in section 2.10.1. For a permanent installation, you will require a custom length cable that fits between the EAS decoder unit and the 9625LG Series Keyer. You can purchase any off the shelf 9 pin straight-through serial cable, or you may make this cable yourself according to the cable drawing in Table 5-1. This cable should not exceed 50 feet. Note that the serial port on the keyer unit must be set for RS-232 operation as described in section 2.1.5.
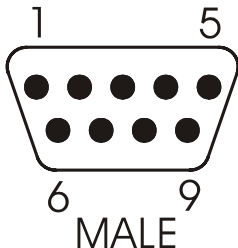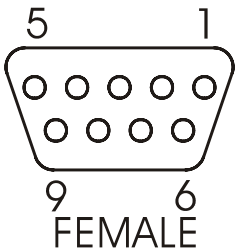
9625LG Series Keyer End				EAS Decoder End		
	9 pin D Male	Pin	Belden 9729	9 pin D Female	Pin	
		1			1	
	TxD	2	-------1a------	RxD	2	
	RxD	3	-------2b------	TxD	3	
		4		Rx Gnd	4	
	Sig Gnd	5	---drain 1----	Sig Gnd		
		6		Tx Gnd	6	
	RTS	7	-------1b-----	CTS	7	
	CTS	8	-------2a------	RTS	8	
		9			9	
	Frame Gnd	Shield	---drain 2----	Frame Gnd	Shield	

Table 5-1: EAS Decoder Extender Cable

If you are using a Sage model EAS decoder please see section 5.1.2 for port configuration information. If you are using a TFT model EAS decoder please see section 5.1.3 for port configuration information.

5.1.2. Sage Decoder Configuration

The Sage provides six serial ports that can be used for a variety of purposes. Each serial port is wired like a standard PC 9-pin connector. Refer to the Sage manual for specific port pin outs. (They are contained in section 12 of their manual at the time of this writing.) Plug the female end of the straight-through RS232 cable into the COM 2 port of the Sage decoder. If this port is already in use, you may use the COM 6 port.

The Sage port must be configured to output the type of data that the 9625LG Series Keyer unit is expecting. To do this, follow these steps on the Sage unit.

1) Press **Menu**
2) Scroll down to *Devices*
3) Press **Enter**
4) Scroll down to *COM2* or *COM6* (depending on the COM port you connected to)
5) Press **Enter**
6) Scroll down to *Device Type*

7) Press **Enter**
8) Scroll down to *Generic CGEN*
9) Press **Enter**
10) Enter *Password*
11) Scroll up to *Go Back*
12) Press **Enter**

Your Sage is now configured to work with the 9625LG Series Keyer. Proceed to section 5.1.4 to connect the audio and GPI controls, to configure the 9625LG Series Keyer and verify that the connections are functioning as expected.

5.1.3. TFT Decoder Configuration

The TFT unit has a number of communications ports on the rear of the unit marked as COM 1 to COM 3 and J103 and J104. The baud rate is fixed at 9600 within the 9625LG Series Keyer and it is configured to communicate using the *Alternate TFT I/F for Trilithic EAS Sytems ALT1 option.* This means you must plug the female end of the straight-through RS232 cable into the COM 2 port of the TFT decoder and configure the port accordingly. The serial port is wired like a standard PC 9-pin connector. This will require that your TFT unit be equipped with the Four Port Expander Board option. If your unit is not so equipped, please contact TFT and order this field installable option.

The TFT port must be configured to output the type of data that the 9625LG Series Keyer unit is expecting. To do this, follow these steps on the TFT unit.

1) Press **Password**
2) Enter *Primary Password*
3) Press **Password**
4) Enter *Setup Password*
5) Scroll down to item 18 *Enable Character Generator Interface*
6) Press **Enter**
7) Scroll down to *Alt1 Alternate TFT I/F for Trilithic EAS Systems*
8) Press **Enter**
9) Scroll down to item 27 *Enable CG Text for RWT*
10) Press **Enter**
11) Scroll up or down to *Yes*
12) Press **Enter**
13) Press **Exit**

Your TFT unit is now configured to work with the 9625LG Series Keyer. Proceed to section 5.1.4 to connect the audio and GPI controls, to configure the 9625LG Series Keyer and verify that the connections are functioning as expected.

5.1.4. Connecting the Audio

The emergency audio from the Sage or TFT decoders must be converted to an AES audio stream before it can be used with the 9625LG Series Keyer. You can use the Evertz 7720ADC-A4 Analog Audio to AES Converter module, or other suitable device to do this. Connect the AES1 output from the 7720ADC-A4 into the AES ALT input on the 9625LG Series Keyer, which has been specified as the voiceover input via the *HTML Audio Setup* page. (See section 3.13.1)

5.1.5. Connecting the GPI Tally Control

The EAS decoders give out a tally control to indicate when an EAS alert message is being broadcast. This tally output must be connected to one of the GPI inputs on the 9625LG Series Keyer to signal it to 'duck insert' the emergency audio into the program audio. For the sake of simplicity in this description connect the tally output from the decoder to the GPI A input on the 9625LG Series Keyer. (See Table 2-4 for a pinout of the GPIO connector on the keyer unit.)

5.2.   CONFIGURING THE 9625LG SERIES KEYER FOR EAS

5.2.1. Configuring the Serial Port

In order for the EAS decoder to communicate to the 9625LG Series Keyer you must configure the SERIAL CONTROL C, COM D port or COM E virtual port for the correct protocol and baud rate. The *SERIAL CONTROL C, COM D* or *COM E (net)* menu item on the *General* menu is used to accomplish this. Set this menu item to *EAS CG* in order for the EAS decoder to communicate to the 9625LG Series Keyer. See section 3.6.5 for information on setting the serial port protocol.

5.2.2. Configuring the GPI Input

In order to use the GPI to insert the EAS audio you must configure the GPI A input as shown in Table 5-2. See section 3.8.1 for information on configuring the GPI inputs.

Menu Item	Setting
CAction	Duck In
OAction	Duck Out
Logo	None

Table 5-2: GPI settings for EAS Tally Control

5.2.3. Configuring the EAS Controls

The EAS menu items are used to configure the EAS crawl position, size, and colours. See section 3.9 for a complete description of these menu items. The brief descriptions of the menu items will guide you in setting up the unit quickly.

Vert Position (V):   The default value should be adequate but you need to ensure that the messages fall within the safe area of the video display so that the entire message is legible once the message is broadcast.

FontHei: Sets the size of the Scrolling text in video lines.

Rate: Sets the speed of the scrolling text message in pixels per field. Rate 1 is the slowest possible scrolling speed and 32 is the fastest scrolling speed. If you adjust the font size you will have to adjust the scroll rate. The smaller the font size the slower you will have to scroll the text box.

5.3. TESTING THE SYSTEM

> **Please ensure all output video from the 9625LG Series Keyer is out of your on-air broadcast path for this test.**

5.3.1. Testing The Sage Decoder

On the Sage decoder.
1) Press **Week**
2) Enter *Password*
3) Press **Enter**

The video monitor should now show a scrolling EAS weekly test message. If you do not see the test message, double check your video connections, ensure that you have the correct video standard selected in the 9625LG Series Keyer. Double check that you have configured the correct Sage port and the correct Device Type for the correct port and that the serial cable is valid and connected to the correct ports. Check the Evertz Web site at www.evertz.com for any new firmware releases for the 9625LG Series Keyer. Check that you are running the most up to date firmware in your Sage decoder at www.broadcast.harris.com.

Evertz tested this configuration with the Sage decoder model 1822 with firmware version 5.111.

5.3.2. Testing The TFT Decoder

On the TFT decoder
1) Press **Weekly Test** button

The monitor should now show a scrolling EAS weekly test message. If you do not see the test message, double check your video connections, and ensure that you have the correct video standard selected in the 9625LG Series Keyer. Double check that you have configured the correct CG Interface Type and that the serial cable is valid and connected to the correct ports. Check the Evertz Web site at www.evertz.com for any new firmware releases for the 9625LG Series Keyer. Check that you are running the most up-to-date firmware in your TFT decoder Phone: 1-800-347-3383.

Evertz tested this configuration with the TFT decoder model EAS 911 with firmware version T.838

This page left intentionally blank

CHAPTER 6
TABLE OF CONTENTS

This page left intentionally blank

6. TECHNICAL DESCRIPTION

6.1. SPECIFICATIONS

6.1.1. Video Specifications (9625LG and 9625LGA)

6.1.1.1. Standard Definition Serial Digital Video Input

Standard: 270 Mb/sec Serial digital component SMPTE 259M
standards supported shown in Table 2-6, software selectable
Number of Inputs: 1
Connector: BNC per IEC 60169-8 Amendment 2.
Equalization: Automatic to 100m @ 270 Mb/s with Belden 1694 or equivalent cable
Return Loss: > 15 dB up to 270 Mb/s

6.1.1.2. Standard Definition Serial Digital Video Outputs

Standard: SMPTE 259M, same as input
Number of Outputs: 2 Program, 1 preview
Connectors: BNC per IEC 60169-8 Amendment 2.
Signal Level: 800mV nominal
DC Offset: 0V ±0.5V
Rise and Fall Time: 750ps nominal
Overshoot: <10% of amplitude
Wide Band Jitter: < 0.2 UI

6.1.2. Video Specifications (HD9625LG and HD9625LGA)

6.1.2.1. HDTV Serial Digital Video Input

Standard: 1.485 Gb/sec HDTV Serial component digital SMPTE 292M
standards supported shown in Table 2-7 - software selectable
Number of Inputs: 1
Connector: BNC per IEC 60169-8 Amendment 2.
Equalization: Automatic to 100m @ 1.5Gb/s with Belden 1694 or equivalent cable
25 m with optional bypass relay installed (+HBP option)
Return Loss: > 15 dB up to 1.5Gb/s Mb/s

6.1.2.2. HDTV Serial Digital Video Outputs

Standard: SMPTE 292M, same as input
Number of Outputs: 2 Program, 1 preview
Connectors: BNC per IEC 60169-8 Amendment 2.
Signal Level: 800mV nominal
DC Offset: 0V ±0.5V
Rise and Fall Time: 200ps nominal
Overshoot: <10% of amplitude
Wide Band Jitter: < 0.2 UI

6.1.3. Video Reference (Not available on early HD9625LG Units)

Source:	Menu Selectable from Input Video or Reference Input
Type:	Auto Detect depends on video format
	NTSC or PAL Colour Black 1 V p-p
Connector:	BNC per IEC 60169-8 Amendment 2.
Termination:	75 ohm

6.1.4. Audio Specifications (9625LGA and HD9625LGA Only)

6.1.4.1. AES Audio Inputs

Standards:	SMPTE 276M single ended AES
Number of Inputs:	2 Groups of 4
Connector:	BNC per IEC 60169-8 Amendment 2.
Sampling Rate:	48 kHz
Signal Level:	1 V p-p ± 10%

6.1.4.2. AES Audio Outputs

Standards:	SMPTE 276M single ended AES
Number of Outputs:	4 Program, 4 preview
	Background and voice over source assignable for each channel
Connector:	BNC per IEC 60169-8 Amendment 2
Sampling Rate:	48 kHz
Signal Level:	1 v p-p
Reference:	From Video Reference.

6.1.4.3. Embedded Audio

Standard:	
9625LGA	SMPTE 272M
HD9625LGA	SMPTE 299M
De-embedder:	Groups 1, to 4 of embedded audio in video input
Embedder:	Program audio embedded to groups 1 and 2 on program video outputs
	Preview audio embedded to groups 1 and 2 on preview video output

6.1.5. LTC Reader

Standard:	SMPTE 12M
Frame Rate:	25 and 30 Fps nominal
Connectors:	3 pin female XLR type connector
Level:	0.2 to 4V p-p, balanced or unbalanced

6.1.6. Control

Upgrade 232 Port:	9 pin female "D", RS-232 57600 baud, 8 bits, no parity
	firmware upgrade
Remote Panel Port:	9 pin female "D", RS-422 9600 baud, 8 bits, no parity
	Remote control panel interface (only available on RCP or DCP versions)

Serial Control Port: 9 pin female "D", RS-232/422 8 bits, no parity, baud rate depends on protocol
Selectable protocols: Automation, EAS Interface, temperature probe interface

COM D Port: (Not available on early HD9625LG units)
9 pin female "D", RS-232/422 8 bits, no parity, baud rate depends on protocol
Selectable protocols: Automation, EAS Interface, temperature probe interface

Media Transfers: RJ-45 100Base T Ethernet, TCP/IP,

6.1.7. General Purpose Inputs and Outputs

Number of Inputs: 8, programmable control functions
Type: opto-isolated, active low
Connector: 15 pin female High-density D
Signal Level: Pulled up to Vext supplied voltage. 3.3V DC provided

6.1.8. Processing Delay

Processing Delay: Delay is typically much less than a line. Probably less than 100 sample clocks.
Maximum delay (in reference mode) is just over a line.

6.1.9. Physical

Dimensions:
 Electronics: 19" W x 1.75" H x 18.75" D.
(483mm W x 45mm H x 477mm D)
 Rack Mount Control Panel: 19" W x 1.75" H x 4.25" D.
(483mm W x 45mm H x 110mm D)
 Desktop Control Panel: 7.75" W x 2.0" H x 6.5" D.
(197mm W x 50mm H x 160mm D)

6.1.10. Electrical

Power:
 Electronics: Autoranging 100-240 VAC 50/60 Hz, 60 VA.
 Optional Remote Control Panel: 12 VDC 9 watts,
Autoranging 100-240 VAC 50/60 Hz power adapter provided

Safety: ETL listed.
Complies with EU safety directive
EMI/RFI: Complies with FCC Part 15 Class A,
EU EMC Directive

6.2. UPGRADING THE FIRMWARE – RS232 Serial Port

6.2.1. Overview

The firmware in the 9625LG Series Keyer is contained on a FLASH EPROM. From time to time firmware updates will be provided to add additional features to the unit.   The firmware update can be initiated using either the front panel or the terminal program method.

You will need the following equipment in order to update the Firmware
* PC with available communications port. The communication speed is 57600 baud, therefore a 486 PC or better with a 16550 UART based communications port is recommended.
* "Straight-thru" serial extension cable (DB9 female to DB9 male).
* Terminal program that is capable of Xmodem file transfer protocol. (such as HyperTerminal)
* New firmware supplied by Evertz.

6.2.2. Terminal Program Setup

1. Connect the serial cable to the **UPGRADE RS232** DB9 connector on the keyer unit rear panel.

2. Connect the 9 pin connector on the end of the serial update cable to the PCs' RS-232 communications port

3. Start the terminal program.

4. Configure the port settings of the terminal program as follows:

Baud	**57600**
Parity	**no**
Data bits	**8**
Stop bits	**2**
Flow Control	**None**

5. Power up the unit.

6.2.3. Initiating Firmware Upgrade Mode Via The Front Panel

This is the recommended method of updating the software in the keyer units. It is activated through the *GENERAL* Setup menu branch. If you cannot invoke the upload mode via the front panel as outlined in step 6 then follow the steps in section 6.2.4.

6. You can invoke the Firmware upgrade mode using the front panel Setup Menu. (See section 3.3 and 3.4 for information on how to operate the front panel menus.) Press the **SETUP** button to enter the top level of the Setup menu. Use the ⬆ or ⬇ buttons to find the *GENERAL* menu item and then press the **SELECT** button. Use the ⬆ or ⬇ buttons to find the *Upgrade Code* menu item and then press the **SELECT** button. Use the ⬆ or ⬇ buttons to scroll to *yes - upgrade now* and then press the **SELECT** button.

When you press the **SELECT** button the keyer unit will be placed in programming mode and its serial port is opened to communicate with the terminal software program. The following message will appear on the terminal screen

```
EVERTZ 7700FC BOOT MONITOR
MON8240 1.1 BUILD 9
COPYRIGHT 2000 EVERTZ MICROSYSTEMS LTD. ALL RIGHTS RESERVED
EXEC RESULT 0
UPLOAD MAIN PROGRAM
```

You will have approximately 10 seconds to start transferring the file before the unit automatically reboots. Proceed to section 6.2.5 for instructions on uploading the firmware using the terminal program.

6.2.4. Initiating Firmware Upgrade Mode From The Terminal Program

You may send commands to the keyer unit or router unit boot monitor in order to upgrade the application firmware in either unit.

7. Power up the unit. After the unit powers up, a banner with the boot code version information should appear in the terminal window.
    For example:

```
EVERTZ 7700FC BOOT MONITOR
MON8240 1.1 BUILD 9
COPYRIGHT 2000 EVERTZ MICROSYSTEMS LTD. ALL RIGHTS RESERVED
EXEC RESULT 0
UPLOAD MAIN PROGRAM
```

8. The following is a list of possible reasons for failed communications:

- Defective Serial Upgrade cable.
- Wrong communications port selected in the terminal program.
- Improper port settings in the terminal program. (Refer to step 4 for settings). Note that HyperTerminal will not change port settings while connected. Click on HyperTerminal's "Disconnect" Button then click the "Reconnect" button to activate changes to the port settings.

9. Within 15 seconds of applying power to the unit press <CTRL - x> several times. You should get a message saying "ENTERING COMMAND LOOP". If the unit continues to boot-up, simply cycle the power and repeat this step.

10. Hit the <ENTER> key on your computer once.

11. Type the word "upgrade", without quotes, and hit the <ENTER> key once.

6.2.5. Uploading the New Firmware

12. You should now see a prompt asking you to upload the file.

14. Upload the "*.bin" file supplied using the X-Modem transfer protocol of your terminal program. If you do not start the upload within 10 minutes the unit's Boot code will time out. You can restart the upgrade process by power cycling the unit.

    The application firmware contained in a "bin" file will have a name consisting of the version number and the product name.

    For the 9625LG Series Keyer unit the name will be something like: 1v02_5_9625DSK-LGA.bin

15. The boot code will indicate whether the operation was successful upon completion of the upload.

    For Example:

    ```
    UPLOAD OKAY
    ```

16. The following is a list of possible reasons for a failed upload:

- If you get the message "transfer cancelled by remote", you must restart the terminal program and load the bin file, then remove and install the module again.
- The supplied "*.bin" file is corrupt.
- Wrong file specified to be uploaded.
- Wrong file transfer protocol used – make sure you specify Xmodem, not Xmodem 1K.
- The PCs' RS-232 communications port can't handle a port speed of 57600.
- Noise induced into the Serial Upgrade cable.

6.2.6. Completing the Upgrade

17. If you initiated the upload from the menu system, the 9625LG Series Keyer will reboot automatically. If you initiated the upgrade using the terminal program then type the word "boot", without quotes, and hit the <ENTER> key once. The unit should now reboot.

18. You can now close the terminal program and disconnect the RS-232 serial cable from the PC.

6.3. UPGRADING THE FIRMWARE – FILE TRANSFER PROTOCOL OVER ETHERNET

The Nomad™ or Overture™ software can be used to update the firmware in Evertz 9625LG Series Keyer units using File Transfer Protocol (FTP). Nomad™ or Overture™ software allows you to upload the same firmware to multiple units at the same time and with the same 'drag and drop' ease that you use to upload media files to the keyer units. For more information see the Nomad™ section of the Keyer Toolkit manual or refer to the Overture™ manual.

6.4.   SERVICING INSTRUCTIONS

> **CAUTION – These servicing instructions are for use by qualified service personnel only. To reduce risk of electric shock do not perform any servicing instructions in this section of the manual unless you are qualified to do so.**

6.4.1. Changing The Fuses

> **Check that the line fuse is rated for the correct value marked on the rear panel. Never replace with a fuse of greater value.**

The fuse holder is located inside the power entry module. To change the fuses, pull out the fuse holder from the power entry module using a small screwdriver. The fuse holder contains two fuses, one for the line and one for the neutral side of the mains connection. Pull out the blown fuse and place a fuse of the correct value in its place. Use time delay 5 x 20 mm fuses rated for 250 Volts with a current rating of 1 amp. Carefully reinsert the fuse holder into the power entry module.

This page left intentionally blank

CHAPTER 7
TABLE OF CONTENTS

Tables

This page left intentionally blank

7.   Troubleshooting the 9625LG Series Keyer

If an error occurs while using the 9625LG Series Keyer, consult the following table for more information. The following table provides a complete list of error messages with corresponding error descriptions.

Displayed Error Message	Error Description
"Not a logo"	While loading the logo, the firmware found was unable to support the load action. The file is probably corrupt.
"No window avail"	All windows are in use. There is a limit of sixteen active logos, each of which has a window on the display. This error occurs when there is an attempt to load a seventeenth logo. Note that the EAS crawl, whether active or not, takes up a window.
"Bad position"	Indicates that an attempt was made to insert a logo that would overlap with another logo(s).
"Bad logo"	Not a logo. There has been an attempt to load a file that is not a logo file.
"2 clocks already" "Too many objects"	Too many *time & temperature* or *CG* logos have been requested. In the case of time, the 9625LG Keyer Series only supports two clocks at one time.
"Bad logo file"	Clock file is corrupt. Error occurs if media is removed.
"Crawl is running"	Too many crawls have been requested. The 9625LG Keyer Series only supports one crawl running at any one time. Similar to "2 clocks already" error, with respect to crawls.
"No logo or audio"	A logo and an audio clip are tied together and one of the elements cannot be loaded.
"Bad audio	Not an audio file. There has been an attempt to load a file that is not an audio file.
"Stream active"	An attempt to insert an audio clip while another audio clip is in play mode.
"MAL read failed"	Unable to read the media action list. Occurs while reading a media action list file.
"Play cache full"	Attempting to load a file into the playout cache when there is insufficient space available.

"Timeout"	Connection timed out. A `connect()` request failed because the connected party did not properly respond after a period of time (timeout period varies, depending on the communication protocol).
"No buffers"	No buffer space available. An operation on a socket was not performed because the system lacked sufficient buffer space.
"Host unreachable"	No route to host. A socket operation was attempted to an unreachable host.
"Host down"	Host is down. A socket operation encountered a dead host. Networking activity on the local host has not been initiated.
"Network down"	Network is down. A socket operation encountered a dead network.
"Network unreachable"	Network is unreachable. A socket operation was attempted to an unreachable network.
"Connection refused"	Connection refused. No connection could be made because the target machine actively refused it. This usually results from trying to connect to a service that is inactive on the foreign host.
"Connection reset"	Connection reset by peer. A connection was forcibly closed by a peer. This normally results from a loss of the connection on the remote socket due to a timeout or a reboot.
"Is connected"	Socket is already connected. A `connect()` request was made on an already connected socket, or, a `sendto()` or `sendmsg()` request on a connected socket specified a destination other than the connected party.
"Not connected"	Socket is not connected. A request to send or receive data was disallowed because the socket was not connected.
"Already"	Operation already in progress. An operation was attempted on a nonblocking object that already had an operation in progress.
"Invalid parameter"	Invalid argument. Some invalid argument (such as unmounting a device that is not currently mounted, mentioning an undefined signal in `signal()` or `kill()`, or reading or writing a file for which `lseek()` has generated a negative pointer). Also set by the math functions described in the (3M) entries of this manual.
"Broken pipe"	Broken pipe. Data has been written to a pipe for which the other (reading) end has been closed. This most often occurs when the reading process exits before the writing process. This condition also generates the signal `SIGPIPE`; the error is returned if the signal is ignored.

"Connection aborted"	Software caused connection abort. A connection abort was caused internal to your host machine.
"Address in use"	Address already in use. Only one usage of each address is normally permitted.
"Address not available"	Cannot assign requested address. Normally results from an attempt to create a socket with an address not on this machine.
"Would block"	Operation would block. An operation which would cause a process to block was attempted on an object in nonblocking mode
"No protocol option"	Protocol option not available. This may be returned for a `getsockopt()` or `setsockopt()` call if the user specified an option that the local system does not support or for any system call that causes the local system to send a network protocol option that a remote system does not support, including a system call that operates on an NFS file.
"Message size"	Message too long. The socket requires that the message be sent atomically, and the size of the message to be sent made this impossible.
"Address family not supported"	Address family not supported by protocol family. An address incompatible with the requested protocol was used.
"Number of files exceeded"	File table overflow. The system's table of open files is full, and temporarily no more `open()`s can be accepted.
"In progress"	Operation now in progress. An operation that takes a long time to complete was attempted on a nonblocking object.
"Again"	Resource temporarily unavailable. This is likely a temporary condition, and later calls to the same routine may complete normally.
"Input/output error"	I/O error - some physical I/O error. This error may in some cases occur on a call following the one to which it actually applies.
"No such device or address"	No such device or address. I/O on a special file refers to a subdevice that does not exist, or is beyond the limits of the device. It can also occur when, for example, a tape drive is not on line or no disk pack is loaded on a drive.
"No space left on device"	No space left on device. During a `write()` to an ordinary file, there is no free space left on the device; or no space in system table during `msgget()`, `semget()`, or `semop()` while SEM_UNDO flag is set.

"No such file or directory"	No such file or directory. This error occurs when a file name is specified and the file should exist but does not, or when one of the directories in a path name does not exist. It also occurs with `msgget()`, `semget()`, and `shmget()` when `key` does not refer to any object and the `IPC_CREAT` flag is not set.
"Not a directory"	Not a directory. A nondirectory was specified where a directory is required, such as in a path prefix or as an argument to `chdir()`.
"Is a directory"	Is a directory. An attempt to open a directory for writing.
"File exists"	File exists. An existing file was mentioned in an inappropriate context; e.g., `link()`.

Table 7-1: Error Messages

8. INDEX